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MAJOR CROP PROGRESS AND WEATHER REPORTING

ADVERSE WEATHER CONTINUES IN MOSCOW AREA, ARMENIA

[Editorial Report] Moscow TRUD in Russian on 21 May 1980, page 4, and Moscow SEL'SKAYA ZHIZN' in Russian on 21 May 1980, page 3, report a significant snowfall on 20 May. The snowfall was made possible by a cold wave which had set in during the second 10 days of May over the central European territory of the USSR. The snow cover in Moscow ranged from 1 to 3 cm. In Dmitrov it amounted to 6 cm and in Istra 5 cm. Snow fell also in Vladimirskaia, Ivanovskaia, Kostromskaia and Yaroslavskaia oblasti. While snow in this area in late May is unusual it is not a record. In 1947 the area experienced a snowfall in early June.

After the passage of a snow front the temperature usually drops sharply and frosts may be observed. The snowfall was not expected to substantially affect the course of agricultural work.

Moscow TRUD in Russian on 22 May 1980, page 4, reports the agricultural program in Armenia continues to be hampered by adverse weather. The likes of the snows which fell in April had not been seen in 100 years. The mid-April snow amounted to 25 cm in mountainous areas and the late April snow to 20 cm in places.

The heavy snow damaged greening fields, vineyards and orchards. Some livestock farms in mountainous areas were wrecked. Perennial grasses and grains were under the snow. It seemed that the weather was softening but then the other day large hail fell in Abovianskiy Rayon, which did not melt for 3 hours. At the kolkhozes and sovkhozes in Armenia they are taking timely measures. Perennial grasses are being resown for annual and silage crops. Vineyards are being restored. Livestock installations have been completely repaired. Timely aid in the form of feed is being offered to those enterprises which suffered from the snowfall.

MAJOR CROP PROGRESS AND WEATHER REPORTING

COLD APRIL WEATHER CHANGES FIELD WORK PLANS

Moscow SEL'SKAYA ZHIZN' in Russian 25 Apr 80 p 1

[Article by Yu. Maksimenko (Rostovskaya Oblast)]

[Excerpts] April's unstable, cold weather changed the initial plans of Don grain growers. Planting got underway much later than usual. While last year 887,000 hectares were planted in spring crops by the beginning of the third 10 days of the month in the oblast, this year they have planted only 422,000 hectares. Now the care for the plantings of winter crops, the planting of early crops, the cultivation of the soil for row crops, and other jobs are all being done at the same time.

"The peculiarities of this spring," says the chief of the agricultural production administration of the Azovskiy Rayispolkom, A. K. Chaykin, "have made us review the reserves of the field conveyer and organize the labor of people and maneuver technical equipment more efficiently, taking advantage of each hour of good weather to carry out the field work in one continuous action. This is also being done in other southern rayons where planting work is gathering speed rapidly."

Azov grain growers were the first in the oblast to complete the planting of spring grain crops and grasses. This matter has been dealt with by farms of Peschanokopskiy, Sal'skiy, Tselinskiy, Neklinovskiy and Oktyabr'skiy rayons.

There is no need to prove how important it is for continuous work of the planting complex to have well arranged technical servicing and the elimination of malfunctions of machines in the fields, as well as the creation of conditions for the fruitful labor of the people. But people are not concerned about this everywhere. An alarming announcement came from Tarasovskiy Rayon: On many kolkhozes and sovkhozes the teams for technical assistance did not have the necessary repair materials or spare parts, and the Tarasovskiy Raysel'khoztekhnika, because it is tying up many machines in technical servicing, is not fulfilling its contractual commitments satisfactorily.

Other obstacles which prevent the farmers from working with great efficiency also appear on the path to the future harvest. Thus in Azovskiy Rayon there is no way the grain growers can influence unconscientious construction workers from the Northern Caucasus administration for main petroleum lines, which is working on the territory of the Samarskiy and Kayal'skiy sovkhoses and other farms. They have dug up the land along many kilometers of fields, mixing clay in with the productive layer of soil, they have thrown pipes around in a disorderly manner, and they have dug open trenches. The time period for completing their work is coming to an end, but the construction workers are not even thinking about recultivation or putting the arable land they have disturbed back into circulation. There are quite a few cases like this, and there are similar complaints in other rayons of the oblast.

Spring planting is gathering force on the Don steppes. The motto of the farmers -- to conduct the work quickly and with excellent quality -- should be mandatory for everyone who is directly or indirectly involved with the land and the fate of the future harvest.

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MAJOR CROP PROGRESS AND WEATHER REPORTING

WEATHER CONDITIONS ENDANGER WINTER CROPS

Riga SOVETSKAYA LATVIYA in Russian 12 Apr 80 p 2

[Article by M. Balin'sh, chief of the republic plant protection station:
"Winter Crops Need Help"]

[Text] Last autumn the agricultural workers of the republic created a reliable basis for increasing the production of grain this year. The winter crops were planted at optimal times, in well prepared and fertilized soil, on an area that considerably exceeded the planned area. A late and warm autumn provided for uniform germination of the shoots and intensive bushing.

In places, the first snow fell on inadequately frozen soil, which caused justifiably concern, especially for the rye. Later, the frost rectified the situation. Moreover, the snow cover was considerably deeper than usual. As inspections showed, the wintering proceeded normally.

But during the first days of April the situation changed. The deep snow cover melted slowly and under it, favorable conditions were created for the development of fusarial wilt (snow mold). This fungus disease develops mainly on thick shoots of winter rye and wheat and also on plants that have been under a deep layer of snow. Fusarial wilt destroys the leaves and the growth point. As a result, the plants die rapidly.

This spring the development of snow mold is progressing rapidly on winter crops. Therefore it is especially important to free the fields of the snow cover. If the soil has melted and the wheels of the tractor do not leave tracks, it is necessary to turn over the settled snow with heavy harrows. It is also possible to spread a thin layer of peat or organic fertilizer over the snow. This accelerates melting.

Today the major and immediate task of each agronomist, chairman and brigade leader is to keep track of the fields of winter crops constantly and, taking into account specific conditions, to take the necessary measures. The

fields that have suffered from snow mold should be immediately harrowed and nitrogen fertilizers should be spread on them as soon as the condition of the soil permits. This will curtail further development of the disease. Aircraft should be used to apply the nitrogen fertilizers in all places where this is possible.

It is necessary to remind farm specialists that the damage caused by snow mold is greater on those fields where untreated seeds were planted last fall. From this one should draw conclusions for the future as well: Special attention should be devoted to the time periods and the quality of the treatment of the seeds this spring. After all, a negligent attitude toward this important work can result in the appearance of other diseases of grain crops and this means also a reduction in their productivity.

Today the fate of the grain fields of the republic depends on our efficiency.

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MAJOR CROP PROGRESS AND WEATHER REPORTING

PEST DEVELOPMENT FORECAST FOR UZBEKISTAN

Tashkent SBL'SMOYE KHOZYAYSTVO UZBEKISTANA in Russian No 4, Apr 80 p 50

[Article by S. Tropina, S. Zapevalova, O. Moroko, and L. Khrushcheva:
"Forecast for Pest Development"]

[Text] A projection of expected rates of reproduction of the main agricultural crop pests in Uzbekistan in 1980 has been drawn up on the basis of an analysis of weather conditions this year and in previous years, taking into consideration the phenology of feed plant development and actual data on the presence of wintering individual agricultural pests.

Bollworm. Conditions have been favorable everywhere throughout the republic for the forming of a wintering reserve of this pest. The central group of rayons of the Kara-Kalpakskaya ASSR is an exception. Here the amassing of wintering individuals has occurred mainly on vegetable and melon crops and corn. In the northern rayons of Tashkentskaya, Syrdar'inskaya, and Dzhizakskaya oblasts and the foothill rayons of the Fergana Valley preparations for the wintering of pests were successful on the earliest cotton plantings and on corn and vegetable-melon crop plantings.

In the rest of the republic pest preparations for wintering were successful in all their favorite habitats.

This year bollworm reproduction is anticipated to be at the 1978 level, and protective measures may be needed on an area of 1.2 to 1.5 million hectares.

Turnip moth. The long warm fall favored the amassing of wintering individuals throughout the republic in foci of the pest's continuous reproduction.

The amount of heat required during the period of preparations for wintering was observed to be at the 1978 level. The central rayons of the Kara-Kalpakskaya ASSR and the northern rayons of Khorezmskaya Oblast were the exception. Here the preservation of foci of infestation is possible on alfalfa plants and vegetable-melon crops.

Protective measures may be possible on an area of 400,000 hectares.

Beet armyworm. In the fall the conditions were favorable for the forming of wintering individuals in zones of continuous preservation of foci of infestation (Khorezmskaya Oblast, Kara-Kalpakskaya ASSR) and periodic reproduction in Bukharskaya and Samarkandskaya oblasti (Bukhara, Karakul', and Kattaburgan), and the foothill rayons in the republic (Shakhrisabz, Baytek, Baysun, and Il'ichevsk). Considering that this is the second year favorable for reproduction of the beet armyworm, it is possible the pest will reproduce in foci on an area of up to 10,000 hectares.

Conditions favorable for beet armyworm reproduction are also taking shape in the Turkmen SSR, in the cotton planting zone located along the left bank of the Amurdar'ye and Karakum Canal.

Tetranychoides. The period for wintering preparations lasted a long time. The amassing of wintering individuals took place in all habitats.

If the year's weather conditions are similar to perennial conditions, Tetranychoides reproduction could reach the 1977 level (800,000 to one million hectares). If weather conditions approximate those of 1978-1979, pest reproduction could be at the level of the previous year.

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MAJOR CROP PROGRESS AND WEATHER REPORTING

REPORT ON 1979 CROP SITUATION AND 1980 PROJECTIONS IN NORTHERN CAUCASUS

Krasnodar SEL'SKIYE ZORI in Russian No 1, Jan 80 pp 2-4

[Article: "Inspired Labor for the Homeland"]

[Excerpts] The material and technical base of the kolkhozes and sovkhozes of the Northern Caucasus and the Central Chernozem Zone has become considerably stronger since the beginning of the five-year plan. Large amounts of money have been invested in the development of agriculture in each rayon of our zones during this time. In the Kuban', for example, during 4 years capital investments amounted to 3.8 billion rubles, which is 710 million rubles more than during the corresponding period of the Ninth Five-Year Plan. About 8 million tons of mineral fertilizers in conventional units have been delivered to the kolkhozes and sovkhozes. Almost half of the branch's fixed production capital has been renovated here, amounting to 3.7 billion rubles. The area of irrigated land has been expanded by 93,000 hectares. Much is being done to change animal husbandry over to an industrial basis. More than 60 percent of the large horned cattle, about 80 percent of the hogs and 72 percent of the poultry in the kray have been placed in premises where all processes for their care have been comprehensively mechanized.

Last year turned out to be very difficult. The severe drought caused some of the planted areas to die off and created strain in all field work. The meteorological adversities became a serious test for all agricultural workers who, having counteracted the caprices of nature with good organization and hard work, overcame the consequences of the dry summer with the least possible outlays. Under exceptionally unfavorable weather conditions, relying on an advanced science of farming, agricultural workers of Krasnodarskiy Kray coped successfully with the tasks that had been set for the sale of grain to the state, giving the country 3.5 million tons of it. During 4 years the kolkhozes and sovkhozes of the Kuban' produced 31.4 million tons of grain, which is 239,000 tons more than the amount established by the plan. Last year farmers of Dagestan and Northern Osetiya overfulfilled the plans for grain procurements. The assignment was also fulfilled by grain growers of Kabardino-Balkariya.

In Korenovskiy, Ust'-Labinskiy, Timashevskiy, Dinskiy and Krasnogvardeyskiy rayons of Krasnodarskiy Kray the productivity of spike crops exceeded 40 quintals.

In Kabardino-Balkariya the farms of Urvanskiy Rayon in 1979 sold the state twice as much grain of winter crops as was planned and covered the assignments for procuring seed corn. They overfulfilled the plans for the sale of sunflower seeds and vegetables to the state. Workers of this rayon have reported that they have fulfilled the five-year assignment for grain procurements. They also met the five-year plans for the procurements of eggs and wool. By the 62d anniversary of Great October they had fulfilled the four-year plan for the sale of milk. The productivity of winter wheat in Urvanskiy Rayon was 43.3 quintals.

Farmers of Mayevskiy Rayon and also of 15 kolkhozes and sovkhoses of other rayons of Kabardino-Balkariya poured as much grain into the grain bins of the homeland during 4 years as they were to have delivered during the entire five-year plan.

The five-year plans for procurements of sugar beets have been completed by the farms of Tambovskiy Rayon in Tambovskaya Oblast, Krasnogvardeyskiy Rayon in Belgorodskaya Oblast and Kantemirovskiy Rayon in Voronezhskaya Oblast. In Voronezhskaya Oblast the Druzhba Kolkhoz in Pavlovskiy Rayon fulfilled the five-year plan for the sale of sugar beets to the state, the Kolkhoz imeni Kuybyshev in Rep'yevskiy Rayon -- for procurements of sugar beets and eggs, and the Put' k Kommunizmu Kolkhoz in Ramonskiy Rayon -- for sugar beets, potatoes and vegetables. In Lipetskaya Oblast the five-year assignments have been completed by the collective of the sheep raising complex of the Rossiya Kolkhoz in Khlevenskiy Rayon, by workers of the Kruglyanskiy Commercial Dairy Farm of the Yelets-Lozovskiy Sovkhoz and animal husbandry workers of the Kon'-Kolodezskiy Sovkhoz-Tekhnikum have completed the assignments for the sale of meat. The assignments for procurements of potatoes have been completed by farmers of Korenevskiy Rayon in Kurskaya Oblast and of the Nal'chickiy Sovkhoz in Kabardino-Balkariya.

The successes achieved by the Soviet people during this five-year plan are a good basis for resolving national economic problems in 1980 and for confidently advancing along the path of the construction of a material and technical base for communism. The goals of the final year of the five-year plan were clearly outlined by the November (1979) Plenum of the CPSU Central Committee and the 2d session of the USSR Supreme Soviet of the 10th convocation.

"We should place at the center of our efforts," said Comrade L. I. Brezhnev at the Plenum of the Central Committee, "the mobilization of workers for fulfillment of the assignments of the final year of the five-year plan. The assignments of the plan for 1980 are not simple. But they must be fulfilled and surpassed. What is necessary for this? It is necessary to

demandingness, good organization, and a creative attitude toward the matter at hand in all sections of the national economy, in each production unit."

The basis of the development and the main condition for the improvement of national well-being is still increased efficiency of production and improved quality of the work. The Plenum of the Central Committee pointed out the need to implement the party policy for increased efficiency and quality with double or even triple energy. Special attention should be concentrated on increasing labor productivity and accelerating the intensification of production on the basis of scientific and technical progress as well as on improving the planning and administration of the economy. The results of the Tenth Five-Year Plan as a whole will depend on how we work this year, and the results of this year will also be the basis on which the following, Eleventh Five-Year Plan will be constructed.

Agricultural workers are faced with responsible tasks for improving the production and supply of high-quality food products for the workers. They will have to produce a gross output in the amount of 136 billion rubles -- 11 billion more than in 1979. This increase should amount to 8.8 percent. The state is allotting immense amounts of money for the development of this vitally important branch of the national economy. This year 37 billion ruble's worth of capital investments are being allotted for this. And on the whole for the Tenth Five-Year Plan more than 137 billion rubles will be allotted for these purposes, or 3.1 billion more than was earmarked by the five-year plan. This year industry will deliver an immense number of various kinds of highly productive machines to the kolkhoses and sovkholes. A large volume of land reclamation work will be carried out. New industrial animal husbandry complexes will be put into operation.

It is the duty of workers of the fields and farms of the Northern Caucasus and the Central Chernozem Zone to do everything possible for efficient utilization of the funds that are being invested in production and the equipment that is being placed at their disposal. They must work steadily so that the strengthening of the material and technical base will be manifested more appreciably in increased productivity and greater yields of grain, sugar beets and other crops that are cultivated on the fields of our zones. This stronger material and technical base should also have a more appreciable effect on increasing the output of animal husbandry products, especially meat. Each kolkhos and sovkhoz should take measures so as to successfully cope with the plan set for this year for the production and procurements of farming and animal husbandry and so as to improve the quality indicators and make up for shortages of past years.

An urgent part of the farmers' work is increasing grain production. We have every opportunity to make the return from the grain field large. In the Kuban' in the final year of the five-year plan it is intended to produce 9.5-10 million tons of grain. This is a million tons more than was harvested during the most productive year of 1978. This task will be carried out primarily by increasing the productivity of grain crops everywhere.

In the kray as a whole, it has been decided to raise 40 quintals from each hectare, or 18 percent more than the average for the past 4 years. It is planned to increase the areas planted in grain crops to 2.5 million hectares. The wheat fields will produce most of the grain. Winter crops have been planted on an area of 1,885,000 hectares at times that are scientifically substantiated and confirmed by advanced practice, and on well prepared soil with only first-class seeds. A task of special importance that is facing Kuban' workers is to complete the program for the assimilation of the Azov flood planes and to increase rice production to 1 million tons in 1960. The areas planted in rice will be increased by 44,000 hectares and will amount to 220,000 hectares. The areas planted in corn will be increased to 235,000 hectares and those planted in peas -- to 100,000 hectares. The gross yield of corn grain is to be increased to 1 million tons and peas -- to 230,000 tons.

Farmers of the Don have set as their task to harvest no less than 9 million tons of grain. In solving the grain problem an important role is assigned to corn. Don farmers, like all Kuban' workers, have resolved to harvest no less than 1 million tons of corn grain.

Grain growers of the Central Chernozem Zone are filled with resolve to increase their contribution to the Russian grain supply. The kolkhozes and sovkhoses of Kurskaya Oblast intend to harvest 25-27 quintals of grain per hectare and to increase the gross yield to 3 million tons. On the farms of Belgorodskaya Oblast each hectare of grain crops should produce no less than 26 quintals, which will make it possible to increase the gross output to no less than 2.5 million tons. Agricultural workers Lipetskaya Oblast will also harvest this much grain.

Farmers of the autonomous republics of the Northern Caucasus will also increase the return from each hectare planted in grain crops. In Kabardino-Balkariya they intend to produce 550,000 tons of grain, including a minimum of 300,000-330,000 tons of corn. In order to accomplish this, the per-hectare productivity of corn must rise to 53 quintals. Field workers of Checheno-Ingushetiya will raise 520,000 tons of grain, Dagestan -- 486,000 tons, and Northern Osetiya -- 400,000 tons.

High goals have been set for increasing the production of other agricultural products as well.

A good basis has been laid for the 1960 harvest. Many rayons have expanded the areas planted in the more productive winter crops. In the Don area they have planted 2,170,000 hectares in winter crops and in Stavropol' -- 1,704,000 hectares. Winter crops will occupy 670,000 hectares in Kurskaya Oblast -- 100,000 hectares more than a year ago. In Voronezhskaya Oblast the areas planted in winter crops will be increased to 1 million hectares for the first time. In Tambovskaya Oblast winter crops will occupy 580,000 hectares.

Among the many problems which agricultural workers must solve today, the most important are to prepare well for spring field work, to ensure an increase in the productivity of agricultural crops everywhere, and to fulfill and overfulfill state plans for the production and procurements of products in 1980.

Mass quantities of organic fertilizers are being shipped onto the fields everywhere. Despite the increased production of mineral fertilizers, they have been and still are the most important for increasing the fertility of the land. More than 400 fertility detachments are working in Tambovskaya Oblast. Last year 9.5 million tons of manure and peat were delivered to the fields, or 3.5 million tons more than in 1978 and more than 3 times the quantity that was delivered 2 years ago. In Tambovskiy Rayon they have brought in more than 6 tons per hectare of arable land, and in Sempurskiy, Tokarevskiy, Zhardevskiy and Kirsanovskiy rayons -- about 3 tons. A considerable amount of work is being done to increase production and to apply organic fertilizers in Krasnodarskiy Kray. During last year more than 30 million tons were applied to the soil and during the past 4 years -- 80 million tons, which is a 1.3-fold increase over the amount during the entire Ninth Five-Year Plan. The farms of Rostovskaya and Lipetskaya oblasti, Northern Osetiya and Stavropol'skiy Kray have skillfully organized the shipment of organic fertilizers.

One of the major conditions for successful field work is a high and reliable degree of readiness of agricultural equipment. The preparation of the machine and tractor fleet for spring is in full swing. Thousands of tractors, trucks and grain combines have been put into a state of readiness. Commitments are being successfully met by machine operators of Kurganinskiy Rayon in Krasnodarskiy Kray, Novoaleksandrovskiy Rayon in Stavropol'skiy Kray, Yegorlykaskiy Rayon in Rostovskaya Oblast, Groznenskiy Rayon in Checheno-Ingushetiya, Yeletskiy Rayon in Lipetskaya Oblast and others.

Each of our kolkhozes and sovkhoses has immense reserves which must be utilized completely for further successful progress. While evaluating positively what has been achieved, one cannot but see the serious shortcomings in the production of products on the farms of our zones. Many kolkhozes and sovkhoses are far from fully utilizing the existing possibilities and do not receive large harvests. During the 4 years of the five-year plan they have failed to deliver to the state a considerable quantity of agricultural products that were envisioned by the plans. And it would be incorrect to explain the poor indicators of their activity by the poor weather alone. Last year again confirmed that the effects of negative factors on the crop are much less than those of an advanced science of farming in which all of the requirements of agrotechnology are observed. One can give many examples in which, under absolutely equal conditions, the farms obtain different results because of different attitudes toward the land, technical equipment and fertilizers. The farms of Korenevskiy Rayon in Kurskaya Oblast in 1979 harvested 266 quintals of sugar beets per hectare and overfulfilled socialist commitments for their procurements, while in

L'govskiy Rayon they were able to harvest only 161 quintals of roots per hectare. In Belgorodskiy and Rakityanskiy rayons in Belgorodskaya Oblast, 10 farms obtained a grain yield of more than 25 quintals per hectare and 5 obtained less than 15; in Roven'skiy and Veydelevskiy rayons, 10 kolkhozes harvested more than 15 quintals while 14 harvested less than 10 quintals.

In Voronezhskaya Oblast Nizhnedevitskiy Rayon occupied one of the leading positions in terms of the harvest. But in recent years the per-hectare yield has decreased by 2 quintals here and the average annual gross production of grain crops has decreased by almost 50,000 quintals. And again the reason is a reduction in the level of the science of farming. They began to apply 1 ton less of organic fertilizers per hectare here. While previously they planted mainly seeds of the first class, for the 1970 harvest only 62 percent of the seeds were of this class. The planted areas were reduced by 5-6 percent by harvest time. The areas planted in winter crops were reduced unjustifiably. The large group method of applying technical equipment is being ignored. In this oblast the gross yields of grain have also decreased in Verkhneimanovskiy, Novousmanskiy, Petropavlovskiy, Semilukskiy and a number of other rayons.

The kolkhozes and sovkhoses of our zones will have to do a good deal for further development of animal husbandry. In many rayons this branch is developing at slow rates, the indicators are still not very high for the production of meat and milk, and expenditures of labor and money per unit of output are decreasing slowly.

As we know, specific measures directed toward the development of animal husbandry were considered in depth at the July (1978) Plenum of the CPSU Central Committee. As Comrade L. I. Brezhnev emphasized repeatedly in his speech at the November (1979) Plenum of the Central Committee, "To implement the decisions of the Plenum and to increase meat production considerably in the country constitute the primary duty of managers of agricultural branches, local party and soviet agencies, specialists and all animal husbandry workers."

These days animal husbandry workers of our zones have entered the All-Union Socialist Competition and are exerting all efforts to conduct the wintering of livestock well and to increase the production and procurements of milk, meat, eggs and wool.

Nationwide socialist competition is developing ever more extensively for a worthy greeting for the 110th anniversary of the birth of V. I. Lenin and the elections to the supreme soviets of the union and autonomous republics and local soviets of people's deputies, as well as for successful completion of the Tenth Five-Year Plan. The Soviet people are filled with resolve to make every day of the new year a day of shock Leninist labor. The main thing here is the concern of each individual for steadily increasing labor productivity, efficiency and the quality of work, stepping up economy and thriftiness, and increasing organization and discipline.

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MAJOR CROP PROGRESS AND WEATHER REPORTING

EQUIPMENT SERVICED FOR TIMELY FIELD WORK

Moscow SEL'SKAYA ZHIZN' in Russian 13 May 80 p 1

[Article by N. Timchenko, Special Correspondent to SEL'SKAYA ZHIZN': "The Zavolzh'e is Sowing"]

[Excerpts] The farms of the Bezenchukskiy Rayon are major producers of trade and seed grain in the Central Trans-Volga Region. There are over 10,000 hectares of arable land. Using powerful technology, mineral fertilizers and Volga water, the kolkhozes and sovkhoses are committed to producing 130,000 tons of grain; 7,650 tons of sunflower seeds; 7,570 tons of potatoes; 6,800 tons of vegetables, in addition to enough reserve for livestock raising in the last year of the five-year plan. The farmers are now preparing the promising basis for a good harvest.

On the fields of the experimental-production farms "Tsentral'noye" and "Krasnogorskoye" of the Bezenchukskiy sovkhos-tekhnikum and on those of other sovkhoses and kolkhozes, we became acquainted with the work of outstanding achievers of high-yield harvests. They have good helpers in the workers of the local raysel'khoztekhnika, who formed a series of service shops and metal workshops for the specialized servicing of field machinery, and sometimes these workers even run the units.

Nevertheless, there is one substantial flaw in the work of uniting the rayon. Having taken out the large powerful tractors "Kirovets" and T-150 for full servicing, the raysel'khoztekhnika accepts the fact that a certain number of these tractors will just be out of commission during the hot weather due to technical problems. Thus, on the largest farm of the rayon, the sovkhos "Bezenchukskiy," due to various breakdown, some 5 or 6 powerful machines are not working.

"It is not always possible to make do with the replacements," notes F. V. Emelyanov, the first secretary of the rayon party. "We expect more direct help from the obsel'khoztekhnikas. One should not be reconciled to the breakdown of several machines."

"Last fall, the farms of Koshinskiy Rayon and their governing Volzhskiy automobile factory took the initiative in proposing that equipment be prepared ahead of time for the field work," said E. F. Chichev, the director of the farm department of the party obkom. The oblast committee approved this initiative and it found wide support. As a result, the repair of harvestors this year will be completed a month sooner than it was last year.

But, of course, the most important work of the farmers of the oblast is to complete the spring sowing. And the spring fields here are not small--some 2.5 million hectares, of which pulse crops will take 1,640,000 hectares. There is a constant struggle to synchronize the operation in order to preserve the maximum moisture in the soil. Thousands of hectares are under harrowing and cultivation. On many farms, corn, sunflowers, potatoes and early vegetables are being planted. More than 60 percent of the spring fields in the oblast are already planted.

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MAJOR CROP PROGRESS AND WEATHER

FIELD WORK PROGRESS IN BELGOROD SURVEYED

Moscow IZVESTIYA in Russian 18 May 80 p 1

[Article by special correspondent S. Troyan (Belgorodskaya Oblast): "The Spring Complex"]

[Excerpts] S. Strukov, the leader of the team engaged in raising sugar beets with a minimum outlay of manual labor on the Zarya Kommunizma Kol-khoz in Yakovlevskiy Rayon, is in the field for the 15th spring. I caught up with him for the first time on the 200-hectare plantation which is located near the Moscow-Simferopol' highway. The machine operator held out his palm and looked at a small handful of earth.

"Dampish," he took a breath, "but it will soon be right. We will apply herbicides at once. This late spring has not left us any time to turn around. We had to simultaneously top-dress the winter crops and sow the early grains, annual grasses, sugar beets, and after that the corn. There are no breaks like there have been in previous years, and there will be none. Here we have to count every minute. We know that the meeting of our obligations depends to a considerable degree on the sowing schedule. Last year our team harvested on the average 200 quintals of roots; this year we plan to get at least 250 quintals."

Actually, after dinner, as soon as they had applied the herbicides to kill the weeds, the collective began to sow sugar beets with two seeders right away.

This is another encounter -- in the middle of May -- on the same field. The team leader reported with satisfaction that the small collective had harrowed the planted field before the shoots had appeared and will now cultivate between the beet rows.

The winter field was expanded considerably in the oblast last fall. Accordingly this made it possible to curtail the volume of work during the current difficult spring harvest period. Still the grain growers have many worries.

"The weather allotted very little time for all the operations," says A. Bogomolov, head of the agriculture section of the oblast party committee. "So that the best times do not slip by, the sowing was done by units of three, four, and even five seeders and, as a rule, in two shifts. There were 420 sowing complexes and hundreds of detachments operating on the farms. Over 30,000 machine operators participated in the work...."

The rayon headquarters for field operations focused the attention of the agricultural workers on the most difficult conditions so as to raise a large yield in any weather. Agricultural workers in Ivnyanskiy Rayon resolved to harvest an average of 29 quintals of grain.

A. Gnivitskiy, first secretary of the Yakovlevskiy Rayon Party Committee, says:

"Winter crops occupy an area in the rayon double that of last year. But in the spring the seeds of the early grains, legumes, beets, and corn were sown on an area of 26,500 hectares. Recognizing that the grain growers are not working at the optimum times, the collectives of industrial enterprises allocated 22 tractors and almost 100 machine operators to help the agricultural workers."

All the farms in the Belgorod area are steering a straight course toward improving qualitative indicators. And as everyone knows, the basis for quality is laid long before the sowing and harvesting. The agricultural workers of the oblast laid the foundation for the 1980 harvest in the fall; they strengthened it in the winter months when they repaired the equipment and prepared the seed.

Encouraging reports are coming in one after the other. The sowing of sunflowers has been completed in the oblast; this crop is sown on 70,000 hectares. The mass planting of potatoes is underway. Day after day the sowing units are leaving the corn fields, which occupy over 260,000 hectares. For the first time over one quarter of this area has been allocated to corn for grain. The sowing of buckwheat and millet is in progress. Simultaneously the care of industrial crops is beginning.

In the last year of the five-year plan the Belgorod grain growers are counting on harvesting an average of 26 quintals of grain per hectare. Their gross harvest is to reach 2.5 million tons. They have resolved to increase the production of other crops as well. To this end the grain growers are working hard and sparing no effort.

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REVIEW OF AGRICULTURAL PRACTICES IN STAVROPOL'YE

Krasnodar SEL'SKIYE ZORI in Russian 1 Jan 80 p 1

[Article by V. Akinin, docent of the chair of economics at the Stavropol' Agricultural Institute: "With a Complex of Measures"]

[Text] The soil and climatic conditions of Stavropol'skiy Kray, which grows such varieties of wheat as Bezostaya-1, Odesskaya-51, Prikumskaya-36, and others, enable agricultural workers to increase crop yields and to improve the quality of the procured grain. In the best years purchases of strong wheat have reached 500,000 tons, but the 1978 harvest set a record. That year the grain yield totaled 26.1 quintals per hectare. Kolkhozes and sovkhoses sold 2.55 million tons to the state (70,000 tons above the target). Of this amount 58.6 percent was strong wheat. The proportion of high quality grain sold exceeded 70 percent in Apanasenskiy, Arzgirskiy, Blagodarnenskiy, Kochubeyevskiy, and Ipatovskiy rayons. Extra payments made to the farms totaled 49.4 million rubles for the kray.

As the experience of kolkhozes and sovkhoses has shown, high quality in grains is formed by a system of agricultural measures which must include systematic application of fertilizers to the plants and eradication of pests. For example, in 1978, 75,000 hectares of plantings received organic fertilizers and over 300,000 hectares received mineral fertilizers along with deep soil cultivation; fertilizers were applied in the rows on 42,700 hectares, and over 1.5 million hectares were top-dressed with ammonium nitrate and ammonium sulfate. Over 830,000 hectares were treated with herbicides to combat weeds, and about 318,000 with toxic chemicals to combat shield bugs. The volume of these operations and outlays on them exceeded the 1977 level 25 to 30 percent, but the sums expended were repaid with interest in additional income -- 19.6 rubles per ton. The average purchase price of one ton of grain, taking into account its high quality, even without increments for sales in excess of the plan, was 91.6 rubles compared with 72 rubles for one ton of ordinary grain. Additional outlays directed at obtaining strong and valuable wheats do not exceed 10 percent of the total outlays per hectare on the plantings.

An analysis of data on grain quality by rayon in the kray refuted the opinion that grain "strength" is mainly dependent on natural factors. The complex of agricultural measures plays a decisive role. For example, on the Kolkhoz imeni Oktyabr'skaya Revolyutsiya in Kochubeyevskiy Rayon concern for quality begins with the selection of the wheat variety and its precursor crop. As demonstrated in practice, the raising of Bezostaya-1 produces the best results following occupied fallow, perennial grasses, legumes, sugar beets, and corn raised for silage. Winter wheat precursors receive 20 to 30 tons of organic fertilizers and up to 20 quintals of mineral fertilizers. The residual effect guarantees the optimum process of nitrogen supply and the necessary ratio of elements. Leaf feeding is mandatory. It is especially effective in the phases of wheat ear formation and flowering, and the amount depends on the probable yield.

Much is being done on the farm to eliminate weeds and to prevent pests and diseases. In the ear formation stage the plants are treated with amino salt 2,4-D, and the fields are annually inspected for the presence of shield bugs.

Strong wheat fields are under the special control of specialists and managers; the haying season and grain threshing are being carried out within an extremely short period. High quality grains are cleaned and are stored separately in sheds. A sample is taken from each lot for analysis, and the "strong" label is imprinted on the invoice of the grain consignment. The variety certificate filled out in accordance with the approval or registration document is attached to the invoice.

The Kolkhoz imeni Oktyabr'skaya Revolyutsiya annually receives from 117,000 to 200,000 rubles in the form of additional payments for product quality. Of this about 20 percent is used for bonuses for field workers and specialists. This gives them the incentive for improving and preserving high quality in the product. Obviously the time has also come to review similar measures of material incentive in official recommendations for wages of workers in agriculture and grain receiving centers.

The increments system currently in use is in need of refinement. At present the purchase price of wheat is raised 30 and 50 percent when the gluten content is 28-31 and over 32 percent, respectively. It would seem that additional payments for each percent of increase in gluten content in the grain would be more effective. Such a differential would channel the efforts of the farms into obtaining high quality products.

Last year agricultural workers in the Stavropol' area undertook a serious experiment. The unusual drought led to the thinning out of the plantings and was responsible for a low grass stand; the grain was not fully formed. But up to 30 quintals of grain were harvested per hectare on farms where winter wheat was sown after fallow, semi-fallow, and legumes (especially sainfoin). Field workers exerted every effort to minimize crop losses.

The harvest-transport complexes carried out the harvest in two shifts; each unit underwent an inspection of its hermetic sealing. Grain harvesting operations, hauling, and storage take place under the supervision of people's control posts and quality control centers.

The grain is carefully prepared at the threshing floors of kolkhozes, sovkhozes, and grain receiving centers.

Taking care of this year's crop, agricultural workers in the Stavropol'ye sowed winter grains on an area of 1,704,000 hectares within a reduced time period and applied mineral fertilizers to the soil at the same time. A considerable part of the fields was top-dressed with the help of the agricultural air service. Careful adherence to the system of agricultural measures will promote a further improvement in product quality.

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MAJOR CROP PROGRESS AND WEATHER REPORTING

WEEDS POSING A PROBLEM ON WINTER GRAIN FIELDS

Moscow PRAVDA in Russian 18 May 80 p 1

[Article by correspondent V. Pankratov (Stavropol'skiy Krai): "The Weeds Are on the Attack"]

[Text] N. Dolina, chief agronomist of the Izobil'nenskiy Sovkhoz is distressed by the sight of the winter wheat field. A considerable part of it is covered with weeds.

The picture is the same on many areas on the Moskovskiy, Zaozernyy, and Russkiy sovkhozes and other farms in Izobil'nenskiy Rayon.

Why? The peculiarities of the current spring could not have been taken into consideration in the plans for the chemical protection of plants drawn up during the winter. It has turned out to be protracted, cold, and rainy -- in a word, favorable for weeds.

It is the mission of the plant protection station to warn of possible danger from the "green conflagration" and to draw up forecasts. The directors think that the specialists are not in a position to assure reliable patrols of the fields: the station does not have the means of transportation. The workers in a number of rayon Sel'khozkhimiya associations also are not fully taking into consideration the circumstances which have developed. For example, the herbicide application plan, which was drawn up during the winter, was only half met in Kochubeyevskiy Rayon.

B. Plyasov, chairman of the kray Stavropol'sel'khozkhimiya Association, says:

"We are now placing all our hopes on the agricultural air service."

Eighty planes are flying over the fields. More than 10 of them came from Central Asia. Nonetheless, it is necessary to make efficient use of ground units as well. However, the directors of the Stavropol'sel'khozkhimiya Association, relying on the air service, are not displaying sufficient concern for effective utilization of ordinary technical resources.

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MAJOR CROP PROGRESS AND WEATHER REPORTING

WINTER WEATHER IMPEDES LITHUANIAN FIELD WORK

Vilnius SOVETSKAYA LITVA in Russian 23 Apr 80 p 1

[Article: "Higher Rates of Work!"]

[Text] In southern and eastern Lithuania where the soil is light, field work and planting were already in full swing last week. Farms of other zones of the republic also began to plant. But on Saturday and Sunday when snow fell and it became cold, the work of preparing the soil and planting was halted in some places. And how does one organize field work under these circumstances so as not to lose time?

An EL'TA correspondent asked this question of the director of the Perloy-skaya Experimental Station of the Institute of Farming, candidate of agricultural sciences, Jonas Aleksonis.

"After the snow fell the moisture remained in the heavier soils for several days. But sandy soil dries out quickly. Thus on Monday afternoon the machine operators went back out onto the fields of our experimental farm and other farms in Varenskiy Rayon. And they did the right thing, since now every hour is valuable. And on light soil, in our opinion, this week is decisive for planting early grain crops."

Even though not all the soil has dried out properly and one cannot begin the work with technical equipment everywhere, in no case can one delay in preparing the soil for planting.

Those farms which begin planting with the lightest soils and gradually move to the heavier ones are working correctly. The sequence of planting of individual crops is not of great significance now.

Planting cannot be postponed because the hollows have not dried out in some places. They can be planted somewhat later, and the rates of planting work will depend on good organization and productive utilization of technical equipment. One can do this especially well by using wide-grasp

cultivators combined with two or three seeders. During planting time all technical equipment should be concentrated in the hands of certain people and on those fields where the soil has dried out and where it can be used productively.

The quality of the work should not suffer because of the rapid rates of planting and special attention should be devoted to this. Therefore one should cultivate the soil at a time when it does not stick to the equipment and the machines do not get stuck. In order for the seeds not to be planted too deep, the soil should not be cultivated to a great depth, harrows should be used after the cultivators, the unseeded strips should be joined together with the grasp of the machines, and roadside strips and edges of fields should be planted carefully. The planted field should be tamped. And it is very important that no time lapse between the preparation of the soil and the planting.

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MAJOR CROP PROGRESS AND WEATHER REPORTING

SPRING AGRICULTURAL WORK UNDERWAY IN ORENBURG

Moscow PRAVDA in Russian 18 May 80 p 1

[Article by correspondent V. Shalgunov (Orenburgskaya Oblast): "Along with the Machine Operators"]

[Excerpts] The sowing is in full swing in the Orenburg area. Oblast agricultural workers have resolved this year to sell to the state not less than 3.85 million tons of grain, including 600,000 tons of strong and durum wheats. The campaign to achieve the planned yields is underway everywhere. Collectives of the sowing complexes, detachments, and teams are using every hour for a maximum return; advanced methods of work are being applied widely at this busy, tense time....

The authority of the agronomists is increasing now on many farms in the Orenburg area. It was won by honest work, constant reinforcement of knowledge, and love of the land. Advanced methods of farming have been adopted with the active participation of the specialists and on the basis of their creative plans. Currently 3.25 million hectares of grain will be sown with the simultaneous application of granulated superphosphate into the rows. The structure of the sowing has been improved. The target for organic fertilizer application has been exceeded. The area sown to highly productive varieties of grain has been expanded considerably in comparison with last year.

Party committees are pursuing a course of strengthening agricultural discipline on lagging farms. There is a great reserve here for increasing the return from the field. Last year 140 kolkhozes and sovkhoses harvested 2 to 5 quintals of grain per hectare less than the oblast average. If we can eliminate this gap, we can obtain about 400,000 tons of grain more.

This applies above all to farms in Sakmarskiy, Tyul'ganskiy, and Sharlykskiy rayons where exactingness toward agronomical services is slack. Frequently the indicators of neighboring farms are sharply divergent. In recent years the average grain yield has been 27.3 quintals per hectare on the Kolkhoz imeni Kuybyshev in Asekeyevskiy Rayon where T. Nasretdinov is

is the chief agronomist. But the yield has been only 14.6 quintals on the adjacent Kolkhoz imeni Chapayev. P. Andreyev, the chief agronomist of this farm, performs his duty to the field badly. It disturbs him very little that the plan for organic fertilizer application has been frustrated, that serious errors have been made in crop rotations and about one third of the plowland is choked with spring wild oats. With such an attitude toward the land we cannot count of a full return from it.

The proliferation of varieties also interferes with a further upsurge in plant cultivation. Because of the inaction of the agronomical services the oblast is now raising ten varieties of wheat, seven varieties of barley, and nine varieties of oats. Many of them have been obsolete for a long time.

The field work front continues to expand in the Orenburg area. The grain growers are facing a crucial task: to conduct the sowing within a shortened time period and at a high level, to guarantee good care of the shoots, and to raise a large crop.

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MAJOR CROP PROGRESS AND WEATHER REPORTING

STATUS OF SPRING FIELD WORK IN ESTONIAN SSR

Tallinn SOVETSKAYA ESTONIYA in Russian 30 Apr 80 p 3

[Text] The regular joint meeting of the board of the republic's Ministry of Agriculture and Goskomsel'khoztekhnika was held yesterday. The agenda -- the status of the spring field work being carried out on the farms.

With the advent of warm weather, the fields are drying out rapidly and this is making it possible to commence selective sowing in all areas. By the beginning of the week, spring grain crops had been sown on more than 7,000 hectares throughout the republic. The greatest amount -- 16 percent of the spring grain crops -- was sown in Kingiseppskiy Rayon. In Khar'yuskiy, Khaapsaluskiy, Khiumaaskiy, Rakvereskiy and Kokhtla-Yarveskiy rayons -- 3-4 percent of the plan. In the remaining rayons -- less. The leaders in the sowing work were the Kaarma and imeni V.I. Lenin kolkhozes in Kingiseppskiy Rayon (409 and 354 hectares respectively).

The joint meeting of the board of the republic's Ministry of Agriculture and Goskomsel'khoztekhnika was held yesterday. A discussion took place on the status of the spring field work being carried out on the farms.

By 5 May the overall plan for spring sowing had been fulfilled by 15 percent, including spring grain crops -- 19 percent. During the past week the sowing work became very extensive in nature: 17 percent of the grain fields were sown in spring crops during this period. The highest sowing rates were recorded on farms in Rakvereskiy and Kingiseppskiy rayons, where during a 7-day period spring crops were sown on 31 and 30 percent of the grain fields respectively.

Last week the status of the sowing work in southern Estonia was hindered by precipitation and in a number of rayons -- by organizational problems. For example, the plans for farms in Khaapsaluskiy Rayon called for the use of 748 tractors for sowing purposes and yet in reality only 450 such machines

were moved out onto the fields. On farms in Khar'yuskiy and Khiyumaaskiy rayons, only two thirds of the overall number of vehicles in the tractor pool are participating in the spring field work.

On a number of farms, more than one half of the areas have been sown in grain crops.

The status of the winter seedlings improved somewhat during the past week and yet they could have been even better if the plantings had been given a top dressing of nitrogen fertilizers at the proper time. Only in Rakvereskiy, Khiyumaaskiy and Khar'yuskiy rayons is this work nearing completion. In the remaining rayons, the status of this work is arousing serious misgivings.

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MAJOR CROP PROGRESS AND WEATHER REPORTING

UTILIZING INDUSTRIAL TECHNOLOGY IN SPRING FIELD WORK

Moscow SEL'SKAYA ZHIZN' in Russian 4 May 80 p 1

[Article by N. Marfin, Moldavian SSR: "According to Industrial Technology"]

[Excerpts] The warm and sunny weather that has finally arrived is quickly changing the color of Moldavian fields. The fields of winter wheat are turning a lush emerald. After top-dressing and spring rains the crops are growing rapidly. Rows of green shoots of spring crops have appeared everywhere. They were sown in a matter of hours, and then the center of work shifted to industrial plantations, as the fields of sunflowers and corn are called today. This name is justified because this year over half of the sunflowers and all of the corn on 345,000 hectares are being cultivated in a new manner without the use of manual labor. This is a serious test and the farmers of Moldavia are striving to pass it with honor.

"Last year," says the first deputy chairman of the republic's kolkhoz council, V. A. Ryabchich, "corn was cultivated according to the new technology on 100,000 hectares. At that time we collected an average of almost 50 quintals of grain per hectare, and in many enterprises yield surpassed 60 and even 70 quintals. These leading enterprises were used as a basis for training cadres. Over 15,000 machine operators and 1,300 specialists received the right of entry into work in industrial technology. Over 500 complex mechanized detachments have been formed in the republic. They are equipped with all of the necessary technology. The deep late-fall plowed fields are well stocked with fertilizers and most fields have been planned since fall. First-class seeds, starting fertilizers and herbicides have been prepared. All of this creates a good basis for producing large programmed harvests."

The republic's enterprises completed the planting of sunflowers in 3-4 days and secured a high quality for each technological operation. The planting of the "sun's flower" has served as a type of test of strength on plantations using industrial technology. The work in large detachments has enabled farmers to distribute sunflowers everywhere in the optimal period despite the caprices of weather.

A characteristic feature of this year's spring is the concern for quality and for raising the effectiveness of each technological device. Today we are speaking of using industrial technology not on individual plots but on the total area. Under such conditions it is especially important to expand the boundaries of utilizing progressive experience.

And what is the status of the initiators of industrial technology? The farmers of Chadyr-Lungskaya Oblast are completing all work at a steady pace without tolerating the minutest divergences from plans and programs. There are about 50 sowing complexes operating in 23 mechanized detachments. They usually utilize the broad Bekker and SUPN-8 sowers, whereas the lighter SPCh-6 sowers are used on sloping and wet lands. Despite the rainfall this has enabled farmers to maintain the optimal work schedule for the zone. In Chadyr-Lungskaya Oblast each field has received a registration certificate and there is a clear system of controls over quality.

In contrast to past years, this spring soil mulching has been very popular in all zones of the republic. On land levellers simple floats are attached to harrows. The floats are usually wooden bars or metal planks. This enables farmers to plan plantations better and to better preserve moisture in the soil.

Industrial technology requires new equipment and attachments. In this matter significant aid is rendered by the chiefs and collectives of urban industrial enterprises. They have manufactured hundreds of levellers and units for the application of herbicides. Unfortunately, the enterprises of agricultural machine building which are primarily responsible for equipment are still fulfilling their obligations poorly. The Rostov Krasnyy Aksay Plant delivered only half of the spring-tooth harrows that were ordered by the republic. BDT-7 disc harrows are delivered late and sometimes incompletely.

Moldavia is the first republic in the country to introduce the new industrial technology of corn cultivation. Being pioneers brings many responsibilities. It is the duty of Moldavian farmers to make every effort to cultivate the planned harvest on the entire area.

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MAJOR CROP PROGRESS AND WEATHER REPORTING

SPRING FIELD OPERATIONS IN VOLGOGRADSKAYA OBLAST

Moscow SOVETSKAYA ROSSIYA in Russian 29 Apr 80 p 1

[Article by V. Drobotov, Volgogradskaya Oblast: "Spring Dictates the Pace"]

[Excerpts] One hears the hum of motors everywhere in the fields. On the eve of 1 May many enterprises of Chernyshkovskiy, Kalachevskiy, Ilovinskiy, Gorodishchenskiy and other rayons of the Don and Meshdurech'ye have completed the sowing of mustard and barley and some have sown spring wheat.

In preparing for the current spring field operations the farmers of Volgogradskaya Oblast have taken into consideration past problems that are related to the utilization of technology in the field. An analysis shows that in the oblast for several years now the average daily output per tractor has not exceeded 8 standard hectares. Last year it was significantly lower than the levels for 1965, for example, whereas resources for repairs and technical services are expended at a rate double that of 15 years ago.

The norms for field operations sometimes do not correspond to growing technical possibilities and shift productivity is lower than planned. For example, research of the interoblast normative station shows that on the basis of a 7-hour work shift the level of norm fulfillment in oblast enterprises comprises 85.3 percent. It is even lower for individual types of field work as cultivation and sowing.

The phrase, "on the basis of the 7-hour shift" is not accidental. I would like to emphasize it because there is a psychological aspect to it, or a village tradition perhaps. What does a shift signify in the village? In the morning the tractor is started, driven to the furrows and work goes on until nightfall. They say they have completed their shift. In actuality the unit has worked throughout daylight, or 10-12 hours. But the norm is calculated on the basis of a 7-hour day! For this reason when the shift output is determined and it is said that a specific unit has fulfilled two norms, actually it turns out that the real norm (based on calculations for 7 work hours) is significantly higher than what is considered in the

enterprise. This results in the insufficiently high rate of fulfillment of shift norms on the average in the oblast. More time is spent on fulfilling norms than planned.

At the present time a great deal has been done in order to influence the effectiveness of the powerful technical arsenal that Volgograd enterprises have at their disposal this spring. There are over 35,000 tractors and tens of thousands of sowers in 1,200 complexes. The extensive application of the Ipatov method for sowing is one of the characteristic features of spring. Volgograd farmers have successfully assimilated this technology for harvesting, but until today sowing complexes were utilized in every enterprise, although the oblast does have its own experience in doing so.

For a long period of time oblast agricultural organs called upon agronomists, engineers and organizers of agricultural production to study and introduce existing oblast experience for the effective utilization of technology.

In the oblast agricultural administration, where I became acquainted with the results of similar analyses, this spring serious measures are being taken to introduce high-quality farming according to the experience of leading enterprises. Sowing complexes are the main, but not the last link. Technical servicing has been organized better than last year. More trained machine operators have been prepared with a view to conducting field work during the day and night both.

There is a great deal of work in the fields. Early grains alone will occupy over 2.5 million hectares. The farmers of the Lower Volga have begun the intensive spring operations with assurance.

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MAJOR CROP PROGRESS AND WEATHER REPORTING

SPRING WORK PROGRESS IN UKRAINE

Moscow IZVESTIYA in Russian 9 Apr 80 p 1

[Article by A. Dolenko, Ukrainian SSR: "Spring Acceleration"]

[Text] Spring has come to the fields of the Ukraine. The enterprises of Krymskaya, Zakarpatskaya, Odesskaya and Khersonskaya oblasts are sowing spring grains and legume crops, grasses and vegetables. Grain farmers are striving to cultivate the largest harvest during the final year of the five-year plan.

The basic grain in the Ukraine is winter wheat. It occupies 10,409,000 hectares in the republic, much more than in previous years. Special attention is now being given to winter fields. Crops, which have been covered by an ice core for a long time, are now being carefully examined and the areas that will be resown completely or partially are being determined. Measures are also being taken to increase the yield of grain from strong and valuable wheats. Winter crops are being top-dressed. On large areas the radical method of fertilizer application to a depth of 3-5 centimeters is being utilized, enabling farmers to use the fertilizer more effectively.

Spring crops will make up a significant proportion in the gross grain yield. The cool weather in March, the abundant snow cover and the deep freezing of the soil held back the beginning of field work, especially in the southern oblasts. This means that the times for sowing early and late crops have been brought closer together. It is necessary to move quickly in order to preserve and effectively utilize moisture. For this reason machine operators are combining technological operations and utilizing large units productively.

In the enterprises that I visited recently workers are guided by the principle that the rapid work pace to prepare the soil and to sow crops must be accompanied by high quality. Machine operators are making sure that the fields are level, are applying fertilizer carefully and are sowing seed at the required and uniform depth, which is very important.

Rayon and kolkhoz staffs on the organization of socialist competition are doing everything possible in order to improve the effectiveness of labor

competition, to extensively utilize moral and material incentives and to disperse the experience of leading enterprises.

It has become traditional to hold a meeting on the eve of the start of sowing operations to discuss existing problems, to elaborate the plan of action and to deal complexly with goals. Thus, at the meeting in the link of Hero of Socialist Labor Yemel'yan Parubka of the Kolkhoz imeni Suvorov, Zhashkovskiy Rayon, there was an exchange of experience on raising sugar beets on the basis of complex mechanization. The beet farmers of Cherkasskaya Oblast made innovative recommendations on the technology of the mechanized production of sugar beets and on improving their quality. During the final year of the five-year plan they plan to cultivate 320 quintals of roots on each of 153,000 hectares and to produce 37.5 quintals of refined sugar per hectare.

It has been decided to sow this technical crop in the republic at the same time as early grains and to complete the work in 4-5 days. This will enable farmers to produce uniform shoots with the proper density of the crop stand and to guarantee a large yield and sugar content in the roots.

Here is another characteristic of the field work that has begun. In the republic the use of industrial technology to raise corn, sunflowers, soy and other crops is widespread. An attempt is being made in enterprises to avoid last year's errors, when some kolkhozes and sovkhoses sowed corn after poor predecessors, on unlevelled land, without observing the sowing rate and applying fertilizer poorly.

Specialists are putting special controls on cultivating feed crops. They are setting themselves the goals of sowing mixtures of pulse crops early, of top-dressing perennial grasses and of performing irrigation operations as soon as possible in order to obtain green fodder all the sooner. The machine operators of the Ukraine have been competing for the highly efficient utilization of technology since the first days in the fields. The group method of work has become widespread and complex detachments on soil preparation and fertilizer application are operating.

Ukrainian workers are striving to complete spring field operations in the best time and with high quality and to secure the production of a good harvest during the final year of the five-year plan.

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MAJOR CROP PROGRESS AND WEATHER REPORTING

SPRING FIELD WORK IN KRASNODARSKIY KRAY

Moscow IZVESTIYA in Russian 11 Apr 80 p 1

[Article by A. Dergachev, Krasnodarskiy Kray: "Spring Dictates the Schedule"]

[Text] In the Kuban' this year's late spring moved and shortened the sowing schedule and urged the already intensive spring operations forward. In the Zavety Il'icha Kolkhoz of Krasnoarmeyskiy Rayon there has been time to sow 1,800 hectares of early spring grains, peas and perennial grasses and 690 hectares of feed beets, green peas and tomatoes. At the same time winter grains, which occupy over 3,000 hectares in the enterprise, were top-dressed by surface methods.

In the kray special attention is given to raising strong wheats and a special technology has been developed for this purpose.

Despite how early it is, sowing equipment has arrived in rice plots. In this we find the characteristic features of the current spring. The extreme intensity of this year's sowing operations is the result of the fight to fulfill the complex program of "Rice-80" in the entire kray.

One of the integral features of the program is early sowing with deep sowing of seeds on every tenth hectare of the sowing area allocated for rice. This method of early sowing was developed in the All-Union Scientific-Research Institute of Rice. Last year this method was used to sow 9,000 hectares experimentally in all of the rice-sowing rayons of the kray. This spring this method will be used to sow 22,000 of 220,000 hectares allocated for rice.

Before sowing operations began meetings of the party-economic aktiv were held in all rice-sowing rayons to examine previous obligations and to accept new ones. They formulated the general all-cadre obligation of collecting 1,100,000 tons of grain this year.

The most organized early sowing operations are proceeding in the Krasnoarmeyskiy Sovkhoz of Krasnoarmeyskiy Rayon, where 1,000 out of 8,142 hectares will be sown.

"We plan to produce an average of 70 quintals per hectare and to harvest a total of 57 tons of rice from the entire area," said the senior agronomist of the sovkhos, I. Nedil'ko. "The early sowing of seeds on one-eighth of our area will also enable us to test and adjust sowing complexes prior to the mass sowing of rice. This year it begins later--at the end of April or the first 10 days of May. During the harvesting we will be able to start 1.5-2 weeks early on the 'early' hectares to test our harvesting conveyor. When we do this productivity does not drop, the quality of the grain is higher than when sowing takes place at the regular time and the expenditure of irrigation water drops because the first watering of plots is not required since during this early time there is still enough moisture in the soil."

As if to make up to farmers for its lateness, spring attempts to accelerate its course. As a result, in some enterprises of the central zone of the kray sowing was begun on beets and sunflowers at almost the same time. However, whereas in the central zone beets have already been sown, in the north and northeast this work has not yet begun because the soil is not ready.

Soon the sowing of corn will begin. Of the 300,000 hectares allocated for this crop, 125,000 will be subject to the application of industrial technology, which completely excludes manual labor and curtails the cultivation of soil to a minimum. Last year industrial technology was tested in the kray on 8,000 hectares in 12 enterprises. In those places where it was used seriously and according to all regulations, the results were good despite the severe drought. For example, in the Ladozhskiy Sovkhoz of Ust'-Labinskiy Rayon corn was cultivated according to this method on 600 hectares and the yield here was 4 quintals higher than for regular crops. Expenditures for grain production turned out to be 3 times smaller.

Fields, seeds and herbicides are ready for cultivating corn according to the industrial method. However, there are problems with the delivery of technology--only one-tenth of the promised BDT-7 heavy harrows have been delivered. Machine builders are obliged to fulfill their promise to supply corn farmers with the necessary equipment. It is essential to help them in this.

Each spring brings something unexpected and different. This year it has brought many new methods and techniques for cultivating grain crops. This is understandable because during the final year of the five-year plan the farmers of Krasnodarskiy Kray have decided to harvest 9.5-10 million tons of grain. A great goal always gives rise to initiative and energy.

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MAJOR CROP PROGRESS AND WEATHER REPORTING

SPRING FIELD WORK IN LITHUANIAN SSR

Vilnius SOVETSKAYA LITVA in Russian 8 May 80 p 1

[Article by A. Simaitis, chief of Farming Administration of Ministry of Agriculture for Lithuanian SSR and S. Tarashkevich: "Maneuvering on a Spring Field"]

[Text] Rainfall and the return of cold weather have complicated considerably the course of the spring field work. Nevertheless, the sowing operations are being carried out at a high tempo on a number of farms despite such conditions. At the present time, almost 100,000 hectares have been sown in grain crops throughout the republic, potatoes have been planted on 5,000 hectares and food root crops have been planted on 2,600 hectares. The sowing of flax and the planting of sugar beets have commenced.

Deserving of praise are the farmers in Zarasayskiy, Shal'chininkskiy, Rokishkakiy, Vil'nyusskiy and a number of other rayons, where 16-24 percent of the spring crop fields were sown in just 4 days.

In analyzing the organization of operations at kolkhoses and sovkhoses in these rayons, one cannot help but take note of the well thought out and thrifty approach being employed in carrying out the work. Here they are constantly and skilfully maneuvering their equipment, they have converted over from extensive to selective sowing, they have combined the work of wide-cut units with a smaller number of machines coupled together and they have selected tracts that are more suitable for working. The gathering up of rocks has been organized on many farms for the purpose of ensuring that the tractors and manpower are employed at maximum capability.

In particular, this work of cleaning up the fields has been carried out very successfully on farms in Vil'nyusskiy and Kupishkakiy rayons. Here field crop growers, students and patrons all went out onto the fields to assist in gathering up the rocks. Each group of individuals was assigned a specific task, payment for work carried out was agreed upon and transportation was organized for moving the workers out onto the fields.

All of these factors served to produce positive results. In those areas where the rocks formerly lay, spikes will rustle noisily this summer. The harvesting of crops on such "cleaned" tracts will be greatly facilitated owing to a lower cutting height and the supplies of straw for feed will be increased.

At the present time, special importance is being attached to carrying out the sowing work as rapidly as possible. Moreover, the circumstances have developed such that a sequence cannot be followed in sowing the crops. The time is at hand to sow all of the crops, with the exception of corn and heat-loving vegetables. And correct action is being taken by those farm specialists who, on dried out crop rotation plan tracts, are simultaneously sowing spring grain crops and annual grasses and planting potatoes. This is precisely the procedure being employed on a number of kolkhozes and sovkhoses in Kretingakiy, Moletakiy and Kapaukakiy rayons.

Although the sowing schedules play an important role, considerable importance is also attached to other agrotechnical requirements. Priority attention must be given to the quality of the work carried out under any and all conditions. Correct preparation of the soil, sowing chemically disinfected seed in accordance with the established norm and reliable placement of the seed in the soil -- these and other matters must constantly be the objects of attention by the farmers' agronomic service.

This year a great amount of attention is being given throughout the republic to expanding the plantings of pulse crops, without which it would be impossible to solve the problem of creating supplies of protein feed. But some areas are experiencing a shortage of pulse crop seed. Under such conditions, the scientists at the Institute of Farming believe that a reduction of 10-15 percent is permissible for the sowing norm for peas, vetch and maple peas, in a mixture with grains. When the agrotechnical rules for cultivating these crops are observed, it is possible to obtain sufficient seed for the future.

Those farm specialists and leaders are wrong who feel that the time for tending the winter crops has passed. In traveling over the republic's fields, one notes the presence of stagnant rain water among the plantings in a number of areas. If such water is not removed on an urgent basis, the rye crops in the flooded areas will perish in 5-7 days. This will result in considerable crop losses. It is believed that pensioners and students should be sent out to aid in removing this surface water. And following the drainage of such tracts, the weakened plants should necessarily be given a top dressing of nitrogen fertilizers. In particular, the grain growers in Vil'nyuskiy, Trakayskiy and other rayons must display haste in carrying out this work, for it was in these rayons that the winter crops entered the spring period somewhat less healthy than desired.

At the present time, as never before, it is important that a thrifty approach be employed in carrying out the field work. The skilful

maneuvering of equipment, converting over to the use of coupled groups of machines as the soil dries out thus making it possible to operate the tractors at maximum capability and selecting operations which can be carried out within the prescribed amounts of time will beyond any doubt raise the tempo of the spring field operations. And the time so gained will be measured in terms of additional tons of grain, potatoes and feed.

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MAJOR CROP PROGRESS AND WEATHER REPORTING

SPRING FIELD WORK PROGRESS, PROBLEMS IN BELORUSSIA

Minsk ZVYAZDA in Belorussian 6 May 80 p 1

[Article by M. Rusakov under rubric "ZVYAZDA Commentary": "Spring Won't Wait")]

[Text] The republic's grain farmers have a lot to do right now. It is necessary to complete the top-dressing of winter crops quickly, prepare the soil properly in good time, and plant the spring crops in the optimal period. Working selflessly, the field workers are building a reliable basis for the successful completion of state plans and socialist obligations set for the concluding year of the five-year plan.

Emulating the shock-workers and right-flank leaders, the machinery operators have mounted a shockwork watch under the slogan "Advanced Technology and Outstanding Quality in Field Operations!"

This kind of approach to the job is especially vital now. The belated onset of spring makes it mandatory to shorten the sowing of spring crops as much as possible. Calculations indicate that the farms' material-technical base makes it possible to prepare the soil for spring grain in five to six working days and plant them in the same period of time. All oblasts have the capability of planting potatoes in eight to ten days, flax and sugar beets in three. But this will require not only properly prepared equipment but also double-shift operation of each equipment unit.

Many kolkhozes and sovkhozes are doing just that. First of all, they top-dressed the winter crops with a full dose of mineral fertilizers in a very short time. Excellent indicators in this work were achieved by the grain farmers of Kletskiy Rayon. They were among the first to complete winter crop tending work on all areas. Considerable attention is being paid to the crops in Ivanovskiy, Dokshitskiy, Mozyrskiy, and other rayons. Grodnenskaya is the leader among the oblasts. Winter crops are also being well tended in Brestskaya and Minskaya oblasts.

Nevertheless, many kolkhozes and sovkhozes are not taking care of this vital matter fast enough. Whole rayons are inexcusably behind in winter crop tending operations. Thus, farmers in Baranovichskiy and Lyakhovichskiy

rayons started top-dressing operations too late. The farms of Mogilevskaya Oblast are working far below their capabilities. Many kolkhozes and sovkhozes in Vitebskaya Oblast are also behind, especially in Gorodokskiy, Lioznenskiy, and Rossonskiy rayons.

Time will not wait. Managers and farm specialists will have to ensure timely completion of all winter crop tending operations. It is also essential to speed up the top-dressing of perennial grasses. But along with such rayons as Brestskiy, for example, where these operations have been completed on all areas, there are also many where the work is going poorly. Vitebskaya and Mogilevskaya oblasts are lagging especially badly.

This year, more than 3.3 million hectares are planted in spring crops in the republic. They include 1.888 million hectares in grain and legumes. Farmers have already sown 1.5 million hectares in barley, spring wheat, oats, feed grain lupine, fiber flax, vegetables, perennial and annual grasses, and root fodder. Many machinery crews are laboring valiantly, with maximum effort, in order to save every precious hour and sow the crops in the optimal times and on a high agrotechnical level.

Field operations are going smoothly and in well-organized fashion in Maloritskiy Rayon. Grain farmers there were the first in the republic to complete the sowing of early grains and legumes. This success came about thanks to the proper deployment of equipment and manpower, accurate organization, and widespread socialist competition.

Brestskaya is the leading oblast. Farmers there have completed almost 98 percent of the spring grain and legume sowing plan. Many farms have completed the sowing of barley and oats and are stepping up the pace of the work in fields planted in feed lupine, fiber flax, potatoes, and vegetables. Nevertheless, certain rayons in the oblast are not doing satisfactory work in the planting of root fodder crops and perennial grasses. Only small areas are sown so far. And there are rayons where field operations are not underway on a large enough scale at all. The work is proceeding too slowly on the farms of Lyakhovichskiy and Kamenetskiy rayons.

The same situation has developed in a number of Gomel'skaya Oblast rayons. It can hardly be considered normal when far fewer spring crops have been sown there than by the farmers in neighboring Brestskaya Oblast. The reason is that too many kolkhozes and sovkhozes are not making proper use of their time this spring.

Similar contrasts are observed in Minskaya Oblast. The kolkhozes and sovkhozes of Kopyl'skiy Rayon, for example, are now completing grain and legume planting operations; farms in Dzerzhinskiy Rayon, on the other hand, are working below their capabilities. Many farms in Grodnenskaya Oblast are also suffering from the same shortcomings and mistakes.

The pace of field operations shows that many of the kolkhozes and sovkhoses have not seriously considered the characteristics of this year's belated spring. Many specialists and managers underrate the fact that the time-tables and quality of field operations largely depend on the adoption of progressive forms of carrying them out. To apply organic fertilizer on time, prepare the soil, and complete the sowing requires excellent organization of labor in all links. The fact is, however, that there are too many shortcomings in field operations that are part of the effort to produce a bumper crop.

The responsibility of the agronomists for the pace and quality of field operations is higher this year than ever before. They must monitor every field and designate the technology that is most appropriate to ensure planned yields on each land section.

To save time, farmers should not wait for the soil to mature on large tracts; the work should be done selectively. This is especially true of Vitebskaya and Mogilevskaya oblasts. But many farms are forgetting about optimal sowing times. This is the only explanation for the fact that soil preparation there, and consequently spring planting operations, are still going too slowly.

In Mogilevskaya Oblast, for example, only 141,000 hectares have been prepared for spring crops, and 107,000 hectares have been sown--18.4 percent of the plan. The equipment is not being put to work fast enough. Too much machinery is still standing idle in the equipment yards. The daily increment in planted areas comes to less than 6,000 hectares--a pretty low figure, considering that 582,000 hectares are to be sown in spring crops.

Unquestionably, field operations this year are taking place in difficult conditions. This requires highly skilled, diligent, and dedicated labor on the part of the grain farmers. A creative approach to the work is the only reliable guarantee of success. The main burden now falls on the shoulders of the machinery operators. Everyone who is responsible for the harvest must show proper concern for highly productive utilization of the equipment.

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MAJOR CROP PROGRESS AND WEATHER REPORTING

SPRING PLANTING UNDERWAY IN KUBAN'

Moscow PRAVDA in Russian 27 Apr 80 p 1

[Article by V. Logvinov (Krasnodarskiy Kray): "Sets of Machinery Have Gone Out Into the Fields"]

[Excerpts] The unusually late spring and the rainy weather held up planting in the Kuban'. But now warm days have come and thousands of sets of machinery have gone out into the fields. Machine operators are striving to conduct the planting of spring crops during the best agrotechnical time periods.

During the final year of the five-year plan the farmers of the kray are striving to obtain 9.5-10 million tons of grain, including 1.1 million tons of rice and many other products.

Problems of increasing grain production are being resolved creatively, persistently and in a planned way in Kanevskiy, Leningradskiy, Ust'-Labinskiy, Korenovskiy, Bryukhovetskiy, Krasnoarmeyskiy, Krasnogvardeyskiy and other rayons. The kray has developed and is consistently implementing a complex of measures which make it possible to transform the Kuban' into a zone of stable and highly profitable agriculture.

The rates and quality of field work and the ensurance of the scientifically substantiated density of the plant stand on each hectare, the harvesting of spike crops in 7-9 calendar days, the destruction of weedy vegetation everywhere, the observance of the equality of planted and harvested areas -- these are the most important constituent parts of the program for transforming the Kuban' into a region of advanced science of farming. Last year for the first time the kray solved another important problem -- on an area of 740,000 hectares the fallow was turned under immediately after the harvesting of spike crops. The remaining moisture was retained in the soil.

All fields in the Kuban' are being planted with first-class seeds. New, more productive regionalized strains of wheat, barley, peas and corn have

been created. Larger areas are being planted in such highly productive and more winter hardy wheats as Krasnodarskaya-39, Krasnodarskaya-46 and Severokubanka. Winter wheat on the entire area -- 1.85 million hectares -- has been topdressed with nitrogen fertilizers.

While increasing the potential of the Kuban' grain fields, it is very important for specialists and managers of rayons, kolkhozes and sovkhoses as well as all production sections to be imbued with a feeling of high responsibility for unconditional fulfillment of commitments that have been made and for complete utilization of reserves, of which there are quite a few. Thus during 4 years of the five-year plan the farms of five rayons of the kray failed to produce more than a half million tons of grain and dozens of farms failed to fulfill the plans for the sale of grain to the state. For example, the plan for grain production was not fulfilled in Novopokrovskiy Rayon. In Labinskiy Rayon, which failed to produce 127,000 tons of grain, the arrears in grain production have become chronic. The per-hectare yield of grain in this rayon has not increased during the past 4 years, but has decreased by 1.5 quintals.

The entire complex of measures for advancing the science of farming is not being carried out persistently and consistently everywhere. This is why in Starominskiy and Pavlovskiy rayons they obtain 7-9 quintals of wheat per hectare less than in the neighboring Leningradskiy Rayon.

The experience of the leading workers shows that success in the struggle for a large harvest on each farm is decided by strict observance of the rules of agrotechnology and the introduction of progressive forms of organization and payment of labor as well as the achievements of science and practice.

The Kuban' is being planted. The Kuban' is being prepared to reach a new goal.

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MAJOR CROP PROGRESS AND WEATHER REPORTING

SOWING IN VIRGIN LANDS

Moscow SEL'SKAYA ZHIZN' in Russian 29 Apr 80 p 1

[Article by A. Kostyukov, Tselinograd: "The Virgin Lands Before Sowing"]

[Text] Spring has not brought anything unexpected as yet to the farmers of the virgin lands. Warm weather arrived on schedule, without hindrances. The efficient grain farmer has already removed the storehouse of grain to ripen in the sun and has moved sowing machines into the farthest fields.

But even if the weather continues to be stable and not capricious, the farmers here cannot depend on an easy sowing period. Very little late-fall plowed fields were prepared as a result of the late harvesting. On a large area straw has been left in heaps. Last spring the cold weather held back the development of weeds and for this reason this year specialists are expecting a large outbreak of wild oats.

"In such cases the most important thing is to avoid compromises in agro-technology and to maintain work quality," says the director of the virgin lands Izhevskiy Sovkhoz, I. Zhangurazov. "Recently we held a 'farmers conference' here at which it was agreed that care and accuracy in every operation are priority requirements. Last spring our grain farmers produced 27.8 quintals of grain per hectare. Today again the reputation of the sovkhov fields must be maintained. This is especially true because many efforts have already been put into the future harvest. Fallow fields have been well-fertilized with organic fertilizer and only first-class seed has been prepared for sowing. All technology is in use. We have collected it into one large complex which should complete the sowing of wheat in 7-8 days according to our calculations. Every participant in sowing operations from the machine operator to the cook today knows his role in the coming work.

Although the difficulties that await farmers are apparent, many collectives of grain farmers are disposed toward fighting for a large harvest during the final year of the five-year plan. Thus, whereas last year every third enterprise of Severo-Kazakhstanskaya Oblast produced over 20 quintals of grain per hectare, this year half of the sovkhovs and kolkhozes here have set themselves this goal.

The majority of virgin-lands enterprises possess all of the possibilities for cultivating full-weight ears. Many of them have prepared only the highest quality seed for the spring. In Kustanayskaya, Turgayskaya and Tselinogradskaya oblasti 88.5-91 percent of the sowing material is first and second class grain. Pavlodarsk and Karaganda farmers have dealt with their seed better than in past years. An important detail of this year's sowing operation is the expansion of the assortment of grain crops. In the northern rayons grain farmers are allocating large areas for the new Omskaya-9 wheat variety. In the central and southern rayons the area in Tselinnaya-21 and Karagandinskaya-2 wheat has been expanded significantly. On barley fields the proportion of Tselinnyy-5 and Donetsk-8 varieties will increase. Since these crops showed themselves well last year, in the fall we can expect a large increase in yield due to their larger sowing area.

This spring the sovkhoses and kolkhozes of Northern Kazakhstan will increase the doses of mineral fertilizer for pre-sowing cultivation. There have been good reinforcements in the machine fleet. Many enterprises conducted very helpful winter "study semesters" and strengthened detachments of machine operators. Pavlodarskaya Oblast workers trained about 5,000 machine operators during this time, for example.

In the virgin lands the sowing schedule is always very short. For this reason it is very important to plan the entire cycle of field work ahead of time and in a business-like way. This will open up vistas for technical as well as agrotechnical maneuvers.

The agronomists of the Ruzayevskiy and Konstantinovskiy sovkhoses of Kokchetavskaya Oblast have worked creatively on their sowing work plans. They began by reviewing each field. In the description that was drawn up there are descriptions of the preliminary cultivation of a specific land area, the degree of weed infestation, moisture supplies, of how soon it will be ready for sowing and similar information. On this basis agronomists have determined the type of cultivation that each field requires and the equipment and schedule that will be utilized. A differential approach to agrotechnical methods is doubly advantageous--it is possible to curtail the amount of time needed for pre-sowing cultivation and to improve its quality.

It was noted long ago that the closer the sowing, the faster time seemed to pass. This is because in the days immediately preceding the start of work concerns are even greater than usual. Virgin land farmers have a great deal to do before sowing begins, especially in shops and equipment yards. For example, Tselinograd farmers still must ready 12 percent of their sowers and 10 percent of their cultivators, the repair of which is inexcusably behind schedule. A subject of great concern is the Kirovets tractor. If its repair is not accelerated, hundreds of powerful machines may not go into the fields. Machine operators are hindered by the shortage of spare parts for the K-700 and K-701 tractors, as before. Recently the Yaroslavl association, Avtodizel', took measures to cancel its debts to Northern Kazakhstan farmers

with the delivery of spare parts for Kirovets motors, but it is not hurrying to correct the situation in some other enterprises.

Seed stores are not in good condition everywhere. The farmers of Sokolovskiy, Mamlyutskiy, Dzhambul'skiy and several other rayons of Severo-Kazakhstanskaya Oblast have low-quality sowing material. There is little good-quality seed in the enterprises of the Kokchetavskaya Oblast special enterprise association, and in one-third of these there is not a single ton of first-class grain!

This spring it is very important to direct grain farmers at a compressed sowing schedule, at planning sowing operations on the basis of the maximal utilization of technology and at a clear organization of labor. Some workers, nevertheless, begin work with the intention of not rushing too much to the finish line. Thus, the enterprises of Lebyazhinskiy Rayon, Pavlodarskaya Oblast, have planned the pre-sowing cultivation of soil for 24 days and sowing of grains for 20 days. Is it possible that the load on technology is higher here than in other places? No, farmers evidently have simply decided to earn themselves the right for a lack of organization and poor work ahead of time. In such cases workers should be reminded of the value of the spring day and about the fact that fall will repay everyone according to his labor.

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MAJOR CROP PROGRESS AND WEATHER REPORTING

SOWING COTTON IN TURKMENSKAYA SSR

Moscow IZVESTIYA in Russian 11 Apr 80 p 1

[Article by R. Pavlov, Turkmeneskaya SSR: "Cotton Farmers in the Fields"]

[Excerpts] Spring did not arrive according to the calendar in Turkmeniya. Cold weather was of long duration, there was abundant rainfall with snow, and only during the middle of March did the sun turn toward spring, putting the start of field work 1-2 weeks behind schedule. Today the condition of the fields is varied. Some are covered with water, which can be seen well from an airplane; others are harrowed, which means that mass sowing is near.

Currently the reclamation workers of subdivisions of the trust, Chardzhouremvodstroy [Chardzhourem water-management construction trust], have moved to the takyr [desert soil] in a broad front. The excavator operators, Hero of Socialist Labor G. Patrino, feels that this is a unique workers' tradition--the one-time lifeless soil today is being put into the hands of efficient workers. Less than 2 years ago a detachment with heavy technology was brought to the rayon. Of a total of 130,000 hectares, one-tenth have now been assimilated--canals have been installed, intra-enterprise collectors have been built, as have pumping stations and field camps. Recently a new rayon--Dostlukskiy--was organized. Cotton farming will be its main branch.

"In the future the southern rayons of the oblast will produce about 300,000 tons of cotton," says the first secretary of the Chardzhouskaya Oblast party committee, R. Khudayberdiyev. "This is almost the same as collected by the kolkhozes and sovkhoses of the oblast last year. At that time the oblast fulfilled its obligations, but of 992 brigades, 354 were in debt. For this reason prior to the start of sowing an oblast seminar was conducted in the enterprises of Khalachskiy Rayon, which was recently awarded the challenge Red Banner of the CPSU Central Committee, the USSR Council of Ministers, the AUCCTU [All-Union Central Trade Union Council] and the Komsomol Central Committee. A school of progressive experience was organized in the best brigades of kolkhozes. We feel that specialists will complete sowing in a shortened period of time after having mastered progressive work methods.

The pace of sowing is increasing persistently. The oblast press center has just received a communication from Khalachskiy Rayon that the brigades of A. Mukhtarov and A. Odayev of the Kolkhos imeni Makhtumkuli completed sowing in 3 days. The motto and work of Kirov farmers are becoming the work norm for cotton farmers, who are entering the fields with a great desire to produce a record cotton harvest during this anniversary year-- 301,500 tons. The machine operators of 115 complexes will begin work in the course of 1 week.

In Maryyskaya Oblast, the primary region for the production of fine-fiber cotton, sowing was begun in an organized manner by the farmers of Bayram-Aliyevskiy and Turkmen-Kalinskoy rayons. This year over 200,000 hectares have been allocated for this crop in the oblast. In five kolkhozes all cotton fields will be sown with the promising Ash-25 and 97321 varieties.

The sowing period has arrived in Turkmeniya. By utilizing every hour of good weather, cotton farmers are laying a firm foundation for the harvest and they are preparing for the 110th anniversary of V. I. Lenin's birth.

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MAJOR CROP PROGRESS AND WEATHER REPORTING

FEED PROCUREMENT IN DAGESTANSKAYA ASSR

Moscow SEL'SKAYA ZHIZN' in Russian 4 May 80 p 1

[Article by B. Daminov; N. Komissarov, Dagestanskaya ASSR: "With Concern About Feeds"]

[Excerpts] It is an intensive work period in the fields of Dagestan. The machine operators of Babayurtovskiy, Khasavyurtovskiy, Kizilyurtovskiy and Nogayskiy rayons completed the sowing of alfalfa in the optimal time and in other places this work is also coming to an end. The alfalfa fields in the autonomous republic have grown this year by 20,000 hectares. Of them, 11,000 hectares will utilize alfalfa as an undercover crop.

The farmers of Kizilyurtovskiy Rayon have been famous as masters of cultivating alfalfa for a long time. The careful observance of agrotechnical rules, larger doses of fertilizer and abundant irrigation enable them to harvest 120-130 quintals of alfalfa hay per hectare during the vegetative period and to fully meet the needs of public livestock in feed.

In the autonomous republic it has been decided to procure no fewer than 1,300,000 tons of coarse feeds. Detachments from interfarm enterprises have been created for the joint use of the machine-tractor fleet when cultivating and harvesting grasses.

The Charodinskoye Interkolkhoz Enterprise has been producing feed for the mountainous rayons for many years now. The directors and specialists of the enterprise are striving to more broadly utilize the achievements of agronomical science and progressive practices on the raising of feed crops.

The kolkhozes and sovkhoses of the mountainous Botlikhskiy Rayon sowed alfalfa on double the planned area this year. The top-dressing of winter spike crops with mineral fertilizers and the preparation of the soil for corn have also been completed. This became possible through the effective work of the Turehunayskoye Interenterprise Association of Mechanization.

The plains enterprises of Dagestan have been producing good yields of corn grain for a long time. This spring it will occupy 5,000 hectares. Last

year a number of enterprises utilized the industrial method of corn cultivation, which yielded a weighty increase in the harvest--up to 20 quintals of grain on each irrigated hectare.

"The weather was dry, but nevertheless by utilizing the experience of Moldavian corn farmers we produced 59 quintals of corn grain on each of 100 hectares in comparison with the planned 35 quintals," said M. Dibirov, an experienced farmer from the Sultan-Yangi-Yurtovskiy Sovkhoz. Now they are working on a 75-quintal harvest.

In the sovkhos there are four corn-farming complexly-mechanized links in operation. The entire area that has been allocated for corn has been cultivated well, the soil has received enough mineral and organic fertilizer and irrigation has taken place.

Many mechanized links of the autonomous republic are cultivating corn according to the progressive method. Farmers studied it in schools of progressive experience, which also used as their basis the links of M. Dibirov and Z. Abukov, who work in the fields of the Kolkhoz imeni Lenin, Khasavyurtovskiy Rayon, as well as on the basis of other collectives.

The rice farmers of Dagestan are also preparing carefully for sowing. They will cultivate rice on an area of 26,400 hectares. Of this, 18,000 are located in Kizlyarskiy Rayon. Here it is planned to produce no fewer than 40 quintals of white grain per hectare this year.

Farmers are striving to complete all spring work in optimal time in order to mark the final year of the five-year plan with a large harvest.

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MAJOR CROP PROGRESS AND WEATHER REPORTING

KUBAN' WORKERS FULFILL GRAIN PROCUREMENT ASSIGNMENTS

Krasnodar SEL'SKIYE ZORI in Russian No 11, Nov 79 pp 2-3

[Article: "Using Land Efficiently"]

[Excerpts] The productive force of the field! Grain growers are investing both the power of technical equipment and their knowledge in order to steadily multiply the fertility of the land and to increase its return many times over. Under extremely difficult weather conditions, they had to fight a battle for the crops this year. Combatting the most severe drought with great mastery, firm will and self-sacrificing labor, they did everything necessary to raise and sell the state the maximum possible quantity of grain and other agricultural products. And, of course, the winners in this battle were those collectives who cared for each hectare, who did not deviate from agrotechnical laws and requirements of the modern science of farming, who spared no efforts and who worked quickly and with excellent quality.

The Kuban' workers were gratified by their victory. They fulfilled the assignments set for the kray for grain procurements. They poured 3.5 million tons of grain into the grain bins of the homeland, including 2 million tons of strong and valuable wheat and 182,000 tons of corn.

And the drought tried to have its way on the Kuban' fields: More than 100 days were unprecedentedly dry, and the relative humidity of the air dropped to the critical limit -- 12-16 percent. But, relying on an advanced science of farming based on precise observance of the recommendations of science, the grain growers of the kray harvested 31.2 quintals of grain from each hectare. Farms of Korenovskiy, Ust'-Labinskiy, Dinskiy, Timashevskiy and Krasnogvardeyskiy rayons especially distinguished themselves. The productivity of the spike crops there exceeded 40 quintals.

Of course, in a year like this it is very, very difficult to make the land be so generous. But the Kuban' workers, struggling to obtain the largest possible yields from each hectare, are arranging their grain growing strategy based on unwavering fulfillment of the commandments of highly

advanced farming on each field. All field work is being done within the time periods established by science and confirmed by advanced practice, a total of 7-9 calendar days are being allotted for harvesting the spike crops and control threshings and being carried out without fail. The planting is being conducted with first-class seeds of regionalized strains and with simultaneous application of fertilizers. The equality of planting and harvesting areas is being strictly observed, as is the density of the plant stand that is established by science.

The movement for complete destruction weedy vegetation on all land areas has spread throughout the kray. Everything possible is being done so as not to allow the weeds to rob the crop plants, to steal the nutritive substances and valuable moisture in the soil, or to reduce the productive force of the fields. Because of a skillful combination of agrotechnical and chemical devices for eliminating weeds, the weediness of the cultivated areas has been significantly reduced. During the past 4 years 33,000 hectares of arable land have been freed of perennial weeds. Moreover, 100,000 hectares have been cleared of quarantine weeds. The implementation of comprehensive measures for destroying weedy vegetation made it possible in the kray annually to harvest an additional half million tons of grain and more than a million tons of sugar beet roots, worth an overall amount of about 80 million rubles.

Last year the valuable experience of the Kuban' workers in the matter of completely eliminating weeds was approved by the board of the RSFSR Ministry of Agriculture, which recommended that this practice be adopted by all farmers of the republic. A high evaluation of the initiative of workers of Krasnodarskiy Kray at the all-union conference on the problem of destroying weedy vegetation which was held recently in Krasnodar. There is no doubt that, following the example of the Kuban' workers, all farms of our zones will undertake the same general campaign for purity of the land, because immediate implementation of measures for destroying weedy vegetation is a most important condition for obtaining stable and large yields and for improving the quality of the products.

The farmers will have to attain high goals in 1980, the final year of the Tenth Five-Year Plan. And all of their thoughts are about the future harvest. Special concern is being displayed for the winter fields. As many years of experience of the kolkhozes and sovkhoses of the Northern Caucasus and the Central Chernozem Zone show, winter grain crops are better than spring crops for utilizing the moisture and nutritive substances and, as a rule, they produce larger and more stable yields. Our selection workers have isolated strains of winter wheat of the intensive type which, with an advanced science of farming and the application of increased doses of mineral fertilizers, are capable of producing 50-70 quintals of grain per hectare.

The grain growers have thought carefully about the best locations for planting the winter crops and have expanded the areas planted in them. For

example, in Voronezhskaya Oblast for the first time the area planted in winter crops has been increased to 1 million hectares, and in Kurskaya Oblast -- to 672,000 hectares, which is 110,000 hectares more than last year. The planting was done at the most favorable times, with the application of mineral fertilizers and using high-quality seeds. The diagonal cross sowing and regular cross-sowing methods were used extensively.

Now, before the actual harvest, the farmers will constantly keep an eye on the areas planted in winter crops. For each field an entire complex of work must be carried out to care for the planted areas, to accumulate and retain the maximum amounts of moisture and to topdress the winter fields. Without this there will not be a rich harvest.

In order to obtain a rich harvest, it is also necessary to restore in the soil the balance of nutritive substances which are annually required for the development of the plants and which are carried away by erosion processes and leaching of the soil. If this balance is not maintained, the soil becomes poor and loses its fertility.

The deliveries of mineral fertilizers to agriculture increase each year. The majority of our farms are constantly concerned about accumulating and correctly utilizing organic fertilizers as well. The Kuban' workers provide a good example. In the kray they are constantly carrying out a whole complex of organizational and technological measures for producing, storing, transporting and applying organic fertilizers as well as constructing manure storehouses and areas for storing organic fertilizers. They have set the task of decisively changing over to purposive, planned production of local fertilizers and a scientifically substantiated system of utilizing them. As a result, while under the Ninth Five-Year Plan they annually applied an average of 10.8 million tons of organic fertilizers, during 9 months of this year the fields have received more than 30 million tons of it, or 7.5 tons per hectare. In the next few years the application of manure to the fields will be increased to 10 tons per hectare of arable land here.

These days socialist competition is being developed ever more extensively for early and high-quality preparation of the machine and tractor fleet for next year's field work. The motto of this competition is "Concern for Technical Equipment -- Concern for the Harvest." Almost 50 repair brigades which have been formed from the best machine operators are now working in the shops of Yegorlyk'skiy Rayon in Rostovskaya Oblast. They have set for themselves the goal of completing the repair of all soil cultivation equipment and planting machines by 15 December 1979 and also fulfilling the plan for the fourth quarter for renovating tractors and grain harvesting combines; before 1 February 1980 they will fully prepare the machine and tractor fleet for spring field work and provide for no less than 97 percent technical readiness of tractors by this time, and 100 percent readiness of soil cultivation and planting machines. A specially created staff is in charge of operational guidance of the repair work. It is also responsible

for distributing incoming spare parts, components and aggregates. The repair work is being done only by the brigade-unit method, and the piece-rate-plus-bonus system has been introduced for wages. Each repaired machine is accepted by a commission which must give it the release for operation -- "D-80."

High commitments have also been made by rural machine operators of Novoaleksandrovskiy Rayon in Stavropol'skiy Kray, Konyshhevskiy Rayon in Kurskaya Oblast, Yeletskiy Rayon in Lipetskaya Oblast, Chernyanskiy Rayon in Belgorodskaya Oblast and other rayons. They are striving to make all the machine and tractor fleet ready in good time.

On many kolkhozes and sovkhoses of both zones stationary and mobile technical service points have been equipped for agricultural machines, machine stations and field camps have been arranged and areas for adjusting technical equipment have been constructed on them.

In the commitments made by the machine operators a large amount of attention is devoted to reducing the cost of repair work, economically expending fuel and lubricants, increasing the productivity of each machine and set of equipment, and maximally taking advantage of all of their technical possibilities. In particular, Novoaleksandrovskiy workers have resolved, by introducing Ipatovo technology, to handle the spring harrowing of fallow and the planting of spring grain and pulse crops in 2 working days, row crops -- in 8 days, the harvesting of grain crops -- in 10 days, the plowing under of stubble -- in 10 days, the turning over of semifallow -- in 15 days, the planting of winter crops -- in 8 days, the procurement of silage -- in 10 days, and the plowing of fallow -- in 20 working days. Machine operators of Konyshhevskiy Rayon in Kurskaya Oblast have given their word to increase the productivity of machines by 5 percent in 1980, to reduce expenditures on their repair and technical servicing by 5 percent as well, and to save no less than 5 percent of the diesel fuel.

The wintertime will also be used for training the necessary number of machine operators and improving their skills so as to provide for two-shift operation of tractors, combines, trucks and sprinkling machines during the busiest periods of field work. In Yegorlykaskiy Rayon in Rostovskaya Oblast more than 750 machine operators will be trained in the system of general technical training, and no less than 120 will be recertified, including 27 for operating new makes of machines. In 1980 the number of tractor operators of classes I and II in Chernyanskiy Rayon in Belgorodskaya Oblast will be increased to no less than 70 percent, and in Yeletskiy Rayon in Lipetskaya Oblast -- to 72 percent.

Agricultural workers of the Northern Caucasus and the Central Chernozem Zone marked the pre-October shock watch with persistent and fruitful labor and successful implementation of socialist commitments. They will do everything necessary to give the country more agricultural products in the final year of the five-year plan and to make a worthy contribution to the nationwide struggle for further rapid improvement in public well-being and strengthening of the might of our homeland.

QUALITY OF STAVROPOL' GRAIN IMPROVES

Krasnodar SEL'SKIYE ZORI in Russian No 1, Jan 80 p 21

[Article by V. Akinin, docent of the faculty of economics of the Stavropol' Agricultural Institute: "With a Complex of Measures"]

[Text] The soil and climate conditions of Stavropol'skiy Kray and the cultivation of such strains of wheat as Bezostaya-1, Odesskaya-51, Prikumskaya-36 and others make it possible for farmers to increase the productivity of the crop and to improve the quality of the grain that is procured. During the most favorable years the procurements of strong wheat have reached 500,000 tons, but the record was set with the harvest of 1978. The yield of grain crops amounted to 26.1 quintals per hectare then. The kolkhozes and sovkhoses sold the state 2.55 million tons of grain (70,000 tons more than was stipulated by the plan). Of this quantity, 58.6 percent was strong wheat. In Apanasenkovskiy, Arzgirskiy, Blagodarnenskiy, Kochubeyevskiy and Ipatovskiy rayons, the proportion of high-quality grain that was sold exceeded 70 percent. The sum of increments paid to the farms amounted to 49.4 million rubles in the kray as a whole.

As the experience of the kolkhozes and sovkhoses of the kray has shown, high quality of grain crops is provided by a system of agrotechnical measures, among which systematic fertilization of the plants and the destruction of pests are mandatory. Thus in 1978, 75,000 hectares of planted area received organic fertilizers and more than 300,000 hectares received mineral fertilizers with deep cultivation of the soil. Fertilizers were applied in the rows on 42,700 hectares and more than 1.5 million hectares were topdressed with ammonium nitrate and ammonium sulphate. More than 830,000 hectares were treated with herbicides against weedy vegetation and about 318,000 hectares, with toxic chemicals against chinch bugs. The aforementioned volumes of work and the expenditures on them exceeded the 1977 level by 25-30 percent, but the expenditures that were made were more than recouped with additional income -- 19.6 rubles per ton. The average procurement price of a ton of grain, taking its quality into account and even without increments for above-plan sales, amounted to 91.6 rubles and the price for a ton of ordinary grain was 72 rubles. Additional expenditures for strong and valuable wheat do not exceed 10 percent of the overall sum of expenditures per hectare of planted area.

An analysis of figures concerning the quality of grain in various rayons of the kray has refuted the previously existing opinion that the "strength" of the grain depends mainly on weather factors. The complex of agricultural measures plays a decisive role. Thus on the Kolkhoz imeni Oktyabr'skaya Revolyutsiya in Kochubeyeveskiy Rayon, concern for quality begins with the selection of the strain and the predecessor of the wheat. As practice has shown, the best results are produced by cultivating Bezostaya-1 after occupied fallow, perennial grasses, pulse crops, sugar beets and corn for silage. For the predecessors of winter wheat, 20-30 tons of organic fertilizers and up to 20 quintals of mineral fertilizers are applied. Their subsequent effects provides for optimal conditions for nitrogen nutrition and the necessary ratio of components. Nonroot topdressing of the plants is mandatory. It is especially effective during the phases of heading and blossoming of the wheat, and the dose depends on the projected productivity.

The farm is doing much to destroy weeds and to prevent the appearance of pests and diseases. During the tillering stage, the planted areas are treated with 2,4-D amine salt, and the fields are annually inspected for chinch bugs.

The fields of strong wheat are under the constant supervision of specialists and managers, and the mowing and threshing of the grain are done in the shortest possible periods of time. High-quality grain is cleaned and stored individually under sheds. A sample is taken from each batch for analysis and the note "strong" is placed on the invoices for shipping the grain. A strain certificate which is filled out in keeping with the documents for approval or registration is attached to the invoice.

The Kolkhoz imeni Oktyabr'skaya Revolyutsiya annually receives from 117,000 to 200,000 rubles in the form of additional payments for the high quality of the products. About 20 percent of this is used for bonuses for field workers and specialists. This motivates them to improve and maintain the high quality of the products. Apparently the time has come to include additional measures for material incentives in the official recommendations regarding payment for the labor of agricultural workers and workers of grain receiving points.

The system of increments that is being applied needs to be refined. Now when the content of gluten is 28-31 percent and more than 32 percent the procurement price for wheat is increased by 30 percent and 50 percent respectively. It seems that it would be more efficient to make additional payments for each percentage point of increase gluten content in the grain. This kind of differentiation would direct the efforts of the farms toward obtaining high-quality products.

Last year farming underwent a serious experience in the Stavropol' area. The unprecedented drought led to thinning of the planted areas, caused a poor grass stand, and the grain was not fully formed. But on farms where

the winter wheat was planted after fallow, semifallow and pulse crops (especially sainfoin), they harvested up to 30 quintals of grain per hectare. The field workers exerted no small amount of effort in order to reduce the losses of the crop. The harvest and transport complexes conducted the mowing in two shifts and each set of equipment was checked for sealing. The harvest work, the shipment and the storage of the grain were under the constant supervision of people's control posts and quality posts.

The grain was prepared carefully on the threshing floors of the kolkhozes, sovkhoses and grain receiving points.

Concerned about this year's crop, farmers of Stavropol' conducted the planting of winter grain crops on an area of 1,704,000 hectares in extremely short periods of time and at the same time they applied mineral fertilizers to the soil. A considerable number of fields have been topdressed using agricultural aviation. Careful observance of the system of agrotechnical measures will contribute to further improving the quality of the products.

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GRAIN SEED AND VARIETY WORK IN SARATOVSKAYA OBLAST

Moscow PRAVDA in Russian 17 May 80 pp 1-2

[Article by A. Vorotnikov (Saratovskaya Oblast): "From Plots To the Field"]

[Text] For the final year of the five-year plan, the Saratov farmers have resolved to supply the homeland with 3.5 million tons of grain. At the present time, 1,348 sowing complexes are in use out on the oblast's fields. Grain crops have been planted on approximately 4 million hectares. The successful fulfillment of the plans and socialist obligations and high final results from the work performed by the grain growers will be dependent to a considerable degree upon the seed and varieties used out on the fields.

The warm weather in the Volga region has accelerated the sowing tempo. The field work is being carried out in an organized manner on a majority of the farms in Saratovskaya Oblast. In Balashovskiy Rayon, two neighboring kolkhozes -- Krasnyy Oktaybr' and Krasnoye Znamya -- have been competing against one another for some time now in carrying out their work. The farmers are striving to employ the latest developments of the plant breeders on an extensive scale. This year the leading brigade at the Krasnyy Oktyabr' Kolkhoz, headed by V. Verbin, furnished assistance to friends in a competition to sow Saratovskaya-46 wheat. Greater use is being made of locally bred effective varieties.

The white buildings of the Scientific Research Institute of Agriculture for the Southeast can be seen in the outskirts of Saratov. This is the plant breeding center for the Volga region. It has included such eminent scientists as Professor A. Shekhurdin and Hero of Socialist Labor and Lenin prize laureate V. Mamontov. They have been replaced by a new generation of researchers. The local varieties have received widespread recognition. Last year alone they were grown on an area of more than 30 million hectares. Moreover, spring wheat occupies almost 68 percent of all of the high quality plantings in the country, millet -- 60 and winter rye -- 16 percent.

The land in Saratovskaya Oblast has become an approved training ground for the plant breeders. Here then can "go on a spree" -- the spring crop fields number some 4.7 million hectares. In particular, the farmers in the region are attracted to strong and durum varieties of wheat. The grain growers understand that the products developed by the scientists are better and thus they strive to introduce them into production operations more rapidly.

"It seems that it was only recently that we were completely satisfied with Saratovskaya-29" recalled N. Cheusov, Hero of Socialist Labor and brigade leader at the Yershovskoye Experimental-Production Farm, "Yet today we are displaying a preference for Saratovskaya-42 or Saratovskaya-46, the indicators of which are better."

Nikolay Gavrilovich has been in charge of a brigade at the Yershovskoye Farm for more than 20 years. Thorough preparations have always been made for the sowing operations. Nor has this current spring period been an exception. The sowing units were inspected in an especially thorough manner. And although all of the 37 machine operators in the brigade can be trusted, nevertheless the brigade leader inspected the sowing units himself.

The Yershovskoye Farm serves as an experimental training ground for the scientific research institute. The farm is typical of those found in the arid Zavolzh'ye region. And just as soon as a variety proves its worth here, it almost certainly is moved to other areas for use.

Three years ago, for example, four varieties of local spring wheat were sown at the Yershovskoye Farm. The greatest amount of acreage was made available for Saratovskaya-38, with only 647 hectares being set aside for the not so well known Saratovskaya-42. This year, Saratovskaya-38 has been rejected and Saratovskaya-42 has been sown on 3,165 hectares: it has better baking qualities and more stable yields.

"This farm is serving as a guide for our remaining kolkhozes and sovkhoses" stated the 1st secretary of the Yershovskiy Rayon Party Committee, A. Dmitriyev, "we set aside 108,000 hectares for spring wheat, of which 95,000 will be occupied by Saratovskaya-42. Its cropping power is greater by 1.5-4 quintals of grain. The strong wheats are very profitable crops. The state pays a worthy bonus for them. The year before last, when we turned over a large quantity of such wheat, we received approximately 7 million additional rubles."

The head of a laboratory for spring wheat plant breeding and seed production, L. Il'ina has devoted more than 30 years to the plant breeding profession.

"In particular, I value highly Saratovskaya-42, 44 and 46" stated Lidiya Gerasimovna, "They are better than the former varieties in terms of all indices. But at the present time we are striving to create varieties for the entire southeastern portion of the country that will be disease-resistant."

During the past few years, the scientists have been resolving a number of complicated problems simultaneously: how to raise the cropping power of drought-resistant grasses, increase the grain yields and improve its quality. For the especially arid regions in the Zavol'zhye area and in Orenburgskaya and other oblasts, the collective at the laboratory developed a new strong wheat -- Al'bidum-1813. It furnishes three more quintals per hectare than does the present regionalized Saratovskaya-42. This new variety will soon be transferred over to the state strain testing network. The local plant breeders are intent on not yielding positions already won and achieving further progress step by step.

The scientists have accomplished a great deal. However, many unsolved problems and unfinished work still remain. For example, there are no highly productive varieties for irrigation farming. Those which are available are not satisfactory for the production workers. No alfalfa seed is available. Yet Saratovskaya Oblast is one of the largest in the country in terms of the amount of irrigated land -- there are 367,000 hectares here. Life demands that these tracts be employed primarily for forage crops, vegetables and grain. The need for highly productive grasses for irrigated fields is especially great.

The production workers value highly the work being performed by the scientists.

"The contribution they make to the harvest is very great" stated V. Sharapov, the 1st deputy chief of the oblast agricultural administration, "This spring alone we are planting spring wheat on 1.37 million hectares. Almost all of the varieties are of the Saratovskaya type. We are sowing new and promising varieties on one half of the areas. Nevertheless, it was hoped that the assistance offered by the institute would be more perceptible and more stable."

Why are the grain growers dissatisfied?

"First of all" stated Viktor Frolovich, "there is the quality of the seed. The scientific-research institute is supplying the kolkhozes and sovkhoses with very little elite seed -- seed mainly of the first reproduction is being received. Yes and there are also problems with regard to the quantities being delivered. The farmers like the Saratovskaya-46 spring wheat variety. The variety is resistant against brown rust."

"It was regionalized 3 years ago" related the chief of the seed production department of the oblast agricultural administration, A. Kostyukov, "Initially we sowed it on 4,000 hectares and this year -- on 95,000 hectares. We would be happy to expand the areas, but no seed is available."

"The reason lies in the fact that not only high quality seed but commodity grain as well is planned for us. And we are held strictly accountable for it" explained M. Sokolov, the director of the Elite Seed Production Trust of the Scientific Research Institute for the Southeast, "This is why we are

unable to carry out our principal work as prescribed. Thus we are not being supplied with sufficient quantities and the quality leaves a great deal to be desired."

It is believed that the planning and agricultural organs should heed these comments.

The production workers are also disturbed over the fact that the breeding of pulse crops has been neglected in the Volga region. The local varieties of peas and vetch have become obsolete. On the sowing days it was necessary to visit many regions. And in all areas the farm leaders and agronomists complained: how much soybeans can be imported from the Far East? The time has come to have one's own soybeans. The situation with regard to seed for buckwheat and forage crops is poor; there simply is not enough.

Such "deficiencies" are explained by a weak material-technical base for seed production. The plans call for the oblast to have 42 modern seed cleaning and drying complexes. Yet only three have been placed in operation. Nor has the work been accelerated by all possible types of "settling" arrangements or by an examination by the USSR Ministry of Agriculture of the plans for corn and grain crop cleaning complexes. This has also served to delay the erection of six plants for the processing and storage of sunflower seed.

The transfer of a variety from a plot to the field is often accompanied by difficulties owing to the fact that many rayon agricultural administrations in Saratovskaya Oblast lack seed production specialists. As a rule, all strain renovation work must be carried out by the chief agronomist.

The extensive introduction of new varieties is being inhibited by operational shortcomings at individual farms. Thus, on the eve of this year's sowing operations at the Put' Lenina Kolkhoz in Lysogorskiy Rayon, incidents of negligence on the part of local agronomists and storekeepers were observed: owing to poor maintenance of the storehouse facilities, 1,000 tons of spring wheat seed turned out to be unsuitable for sowing. Prior to going out onto the fields in Novoburasskiy Rayon, the following fact was brought to light: of 3,266 tons of wheat, 2,209 tons were from a non-regionalized variety and a low reproduction. Almost similar situations prevailed in the case of the seed for barley, oats and buckwheat. Indeed, special farms have been established here for carrying out variety renovation work on an extensive scale and yet they are performing very poor work in this regard. Could this be the reason why the local hectares produce such scanty yields?

On many farms the agrotechnical schedules for carrying out the work are not being followed. Weak organization of the work and shortcomings in the technical equipping of the kolkhozes and sovkhoses are adversely affecting the operations. The farmers in all areas are complaining: the requisitions for spare parts and sowing equipment are being handled in a very poor manner. All of these factors are creating additional difficulties and hindering the development of high final results.

The following situation is especially apparent at the present time: in those areas where a close association has developed between the grain growers and scientists and where constant concern is displayed with regard to introducing new developments into operations, the work proceeds in a better manner and the cropping power as a rule is higher. For example, the varietal structure of the grain fields on farms in Kraenokutskiy Rayon is constantly being renovated. This is in large measure the result of the work being performed by specialists attached to the local experimental-plant breeding station. It is because of them that greater use is now being made of Kraenokutka-6 durum spring wheat. Compared to other varieties, its cropping power is higher by 3-4 quintals, it contains more protein and it is distinguished by high food qualities.

"This variety" stated the 1st secretary of the Kraenokutskiy Rayon Party Committee, N. Zhevak, "we sowed this year on 25,000 hectares. It bears mentioning that the sowing of early grain crops on an area of 91,000 hectares has already been completed. Using their wide-cut sowing units in a productive manner, the farmers are doing everything possible to ensure that each hectare of high quality sowing produces a high yield. And the scientists are also doing their part. They are recommending the use of a new and more promising variety for our fields -- Kraenokutka-7. We will be testing it."

The workers in Saratovskaya Oblast are fully resolved to provide the country with a fine harvest. And excellent grain will testify to the laborious work carried out not only by the plowing and sowing personnel but also by the scientist-plant breeders.

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CSO: 1824

MAJOR CROP PROGRESS AND WEATHER REPORTING

IMPORTANCE OF SUNFLOWER RAISING STRESSED

Moscow AGITATOR in Russian No 19, Oct 79 pp 32-33

[Article by L. Vashchukov, chief of the agricultural statistic administration of the USSR Central Statistical Administration: "Sunflowers"]

[Text] Sunflowers are the main oil-bearing crop in our country. Approximately two-thirds of the vegetable oil is processed from their seeds. The byproducts are also utilized extensively: First-grade oil cakes are made into halva, and second-grade cakes and oil-seed meal -- into high-protein feeds.

The USSR produces half of the world output of sunflowers. We raise many more of them than the other largest producers -- the United States, Argentina, Romania, Yugoslavia and Turkey -- taken together. Almost half of the sunflowers in our country are produced by farms of the RSFSR and more than 40 percent -- by the Ukraine. The yield increased from 0.75 million tons in 1913 to 2.64 million tons in 1940. The prewar level was surpassed in 1955. The average annual yield under the Sixth Five-Year Plan (1956-1960) was 3.6 million tons, the Seventh -- 5.07, and the Eighth -- 6.39 million tons. Subsequently, however, it decreased to 5.9 million tons under the Ninth Five-Year Plan and 5.5 million tons in 1976-1980. The record crop (7.39 million tons) was produced in 1973.

To a certain degree, this reduction was caused by an unjustified reduction of the areas planted in sunflowers and the utilization of part of the planted areas for green fodder for livestock. The areas planted in sunflowers for seeds have been (millions of hectares): 1913 -- 0.98; 1940 -- 3.54; 1965 -- 4.87; and 1978 -- 4.56. This little more than 2 percent of all the planted areas (in the Ukraine the crop occupies more than 5 percent of all the planted areas and in Moldavia -- about 8 percent). The proportion of the crop of sunflower seeds from irrigated land has increased from 0.2 percent in 1965 to 1.2 percent in 1978.

The prerevolutionary level of productivity of sunflowers (7.6 quintals per hectare in 1913) was regularly surpassed in the middle of the 1950's.

Under the Sixth Five-Year Plan the yield per hectare amounted to an average of 9.1 quintals a year, the Seventh -- 11.2, the Eighth and Ninth -- 13.2, and in 1976-1978 it dropped to 12 quintals, which was also the main reason for the reduction in productivity. The greatest productivity was reached in 1973 -- 15.5 quintals.

Reserves for increasing production are apparent from the fact that the productivity varies sharply throughout the country. Thus last year 3,923 farms or 38.4 percent of the overall number of producers of sunflowers harvested more than 13 quintals per hectare, including 12.5 percent which harvested more than 18 quintals. But in addition to this, 35.8 percent of the farms harvested only 9 quintals per hectare, including 14.6 percent which harvested up to 3 quintals. As a result, the average productivity for the country has also been extremely low -- 11.7 quintals. Farms of a number of oblasts of the RSFSR, Georgia and Kazakhstan are significantly worse than the others in terms of this indicator.

There are sharp differences in productivity even on the farms of the same zone. Thus in Saratovskaya Oblast as a whole for a number of years now it has been decreasing and last year it amounted to only 5.8 quintals. But on the Kolkhoz imeni K. Marx in Balakovskiy Rayon in the same oblast under this five-year plan it reached 14 quintals, including last year when it was 17.1 quintals per hectare. The farms of the Moldavian SSR harvested an average of 16.5 quintals of oil-bearing seeds per hectare last year, and the Novyy Put' Sovkhoz in Kaushanskiy Rayon in this republic harvested 21.2 quintals. In Kraenodarskiy Kray, the farms of Ust'-Labinskiy, Leningradskiy, Korenovskiy, Dinskiy, Timashevskiy and Kanevskiy rayons harvest 24-27 quintals per hectare. The division of A. Mayboroda of the Kolkhoz imeni Gor'kiy in Leningradskiy Rayon last year harvested 34.4 quintals per hectare, and the team of V. Pirogov of the Kolkhoz imeni Il'ich of the same rayon -- 35 quintals. But on the farms of Mostovskiy Rayon the average productivity amounted to only 12.6 quintals and on those of Otradnenskiy Rayon -- 12.5 quintals.

The low productivity on many farms is caused by serious violations of agrotechnology. Sunflowers are a capricious crop that are subject to diseases. These diseases can be avoided if the crop is planted on the same field no more frequently than every 8-10 years. And the crop rotations on the farms are frequently arranged in such a way that the crop is cultivated on the previous after 5-6 years and sometimes even sooner, when the causative agents of the diseases have not yet disappeared. Because of this alone, losses reach 20-30 percent and sometimes half of the crop is lost. Large areas are planted with seeds of less productive, nonregionalized strains that have long growing periods. Moreover, sometimes the seeds are not calibrated and not cleaned, and the planting times are prolonged. For these reasons it is sometimes necessary to harvest during cold and rainy weather when it is difficult to avoid large losses.

Many farms do not provide for the scientifically substantiated density of the plant stand and allow thinning or excessive density of the plants -- they leave 70,000-100,000 and more plants per hectare instead of the proper 35,000-45,000. Then the heads and the grain are small and the productivity decreases by 25-30 percent, and in dry years -- by more than half. Experience shows that from 3 to 7 quintals of additional yield can be obtained by pollinating the sunflowers with bees. To do this, it is necessary to have one or two bee colonies per hectare. On many farms significant damage to the crop is caused by weeds, even though long ago we accumulated good experience in fighting against them by loosening the soil, cultivating the interrows and treating the planted areas with herbicides.

It is necessary to harvest sunflowers in 5-7 days. To take even 10-12 days longer than this leads to a loss of up to 3 and sometimes even more quintals of oil-bearing seeds per hectare. Yet frequently the harvest is prolonged by several weeks and even months. The quality of the seeds also deteriorates then. True, on the whole for the country their oil content has increased from 43.96 percent in 1965 to 46.89 percent in 1978, but the strains that have been isolated by Soviet scientists make it possible to receive much more than this. To do this it is necessary, in particular, to dry the seeds immediately after harvesting. In order to store them reliably, the moisture content should exceed 7 percent. It is necessary to expand and modernize drying and storehouse facilities on the farms and at processing plants. An increase of 1 percent in the oil content of the seeds means an additional 60,000 tons of vegetable oil a year in the country as a whole.

"Under the Eleventh Five-Year Plan," noted Comrade L. I. Brezhnev in his speech at the July (1978) Plenum of the CPSU Central Committee, "it will be necessary to sharply increase the production of sunflower seeds. It is necessary to increase their productivity, to eliminate losses of seeds during harvesting, to develop more actively the base for storing and processing them, and not to allow spoilage of the products."

Following the example of the Yampol'skiy sugar beet growers, the leading farms, having concluded agreements for cooperation with processing enterprises, have set as their goal to obtain a ton of oil from each hectare of area planted in commercial sunflowers. Last year this task was carried out successfully, for example, by farms of Saratskiy Rayon in Odesskaya Oblast.

Last year 75 percent of the sunflowers were produced by kolkhozes and inter-farm enterprises, 23 percent (as against 2 percent in 1940) -- by state farms, and 2 percent (as against 11 percent in 1940) -- by private subsidiary farms belonging to the people. The farms sold about 80 percent of the gross yield mainly in the system of state procurements, but some of them were sold on the kolkhoz market and to their own workers. There is a real possibility of increasing the sale of oil-bearing seeds to the state while reducing the proportion that goes for intrafarm needs.

This is the more expedient since the sale of oil-bearing seeds is very advantageous for the farms. Direct labor expenditures per quintal of them have decreased because of the mechanization of production on the kolkhozes from 3.54 man-hours in 1965 to 2.05 in 1978, and on the sovkhozes -- from 2.31 to 1.86 man-hours. The high procurement prices that were set in 1965 give the farms a large amount of pure profit which exceeds production costs 1.4-1.5-fold. On farms of Krasnodarskiy Kray the profitability of sunflowers with respect to production costs exceeded 200 percent. On the Rossiya Kolkhoz in Bazarno-Karabulakskiy Rayon in Saratovskaya Oblast, where sunflowers occupy 13 percent of the arable land, they produced up to 40 percent of all the profit from crop growing.

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MAJOR CROP PROGRESS AND WEATHER REPORTING

BRIEFS

WHEAT PLANTING--Tselinogradskaya Oblast--The grain fields in Tselinogradskaya Oblast occupy 2.8 million hectares. Within a few days they will resound with the hum of motors: The grain growers will begin to retain the moisture. And in the middle of May the most responsible time will begin -- the planting of wheat. It will be necessary to place the seeds in the soil in 10 days -- such are the optimal time periods allowed by nature in this harsh steppe region. If you meet the schedule you will have grain, if you are late your harvest will be small. Therefore, in planting it is important to have continuous, highly productive work on the part of each set of machinery. Grain growers of virgin Priishim'ye have adopted large commitments for the final year of the five-year plan. And it is necessary to do everything possible so as to meet them successfully. [Excerpts] [Moscow PRAVDA in Russian 18 Apr 80 p 1] 11772

GRAIN, PULSE CROPS--Zaporozh'ye--Taking advantage of every hour of good weather and skillfully maneuvering technical equipment, workers of the oblast have completed the planting of early grain and pulse crops on an area of more than 130,000 hectares. [Text] [Moscow PRAVDA in Russian 26 Apr 80 p 1] 11772

MOLDAVIAN PLANTING--The April sun has generously warmed the land and the long-awaited spring work time has come to the fields of Moldavia. [Text] [Moscow PRAVDA in Russian 27 Apr 80 p 1] 11772

ALTAY GRAIN FIELDS--In the final year of the five-year plan the grain fields of Altay will occupy more than 4.5 million hectares. The farmers are planning to plant this area in 8-10 days. [Excerpts] [Moscow IZVESTIYA in Russian 12 Mar 80 p 1] 11772

SELECTIVE HARROWING--Stavropol'--Yesterday machine operators of Stavropol' began selective harrowing of areas of fields. Because of the prolonged March cold spell, the field work in the kray was begun considerably later than last year. In order to conduct the spring agrotechnical complex everywhere at the best times, the farmers concentrated technical equipment

in field camps ahead of time. In a state of complete readiness are thousands of mobile complex detachments with specialized teams for preventive maintenance and on-the-spot repair of the sets of machinery. This is the third spring during which Stavropol' workers have used technical equipment according to the method of their Ipatovo compatriots. The experience that has been accumulated will make it possible for the grain growers of the kray to take care of the harrowing rapidly and then, in keeping with the same condensed schedule, to complete the planting and obtain vigorous shoots before the dry steppe winds begin to blow. [Text] [Moscow TRUD in Russian 23 Mar 80 p 1] 11772

LATVIAN SPRING WORK--On the whole this year spring planting is somewhat ahead of last year. Thus the spring grain crops were planted on approximately 5,000 hectares more than they had been by this time last year. The planting has been started in earnest in Kuldigekiy, Līepāyskiy, Talsinskiy and Rīzekiy rayons. Ventpilsēkiy farmers have successfully begun planting. Other spring work is also continuing. The treatment of seeds of grain crops is being completed and the top dressing of winter crops is continuing. The areas planted in winter crops require careful attention. In many places they are weak and have been subjected to "snow mold." Specialists must devote special attention to winter crops. There are now about 10,000 tractors in operation on the fields of the republic. Primary attention should be devoted to the quality of the entire complex of spring field work -- from cultivating the soil to planting the seeds. Each day the planting gathers speed. Agricultural workers are displaying a high level of organization. Each day counts now. The main thing is for all work to be done at the optimal times and with high quality. [Text] [Riga SOVETSKAYA LATVIYA in Russian 25 Apr 80 p 1] 11772

IPATOVO EXAMPLE--Simferopol'--Spring came late for grain growers on the Crimean peninsula. Today the planting of early spring crops has been started on the farms of many rayons. About 300 comprehensive mechanized detachments and teams assumed a good tempo from the very first hours. The prolonged cold spells made it necessary for the seeders to hurry: They allotted only 3 or 4 working days for planting peas, barley, oats, grain mixtures and grasses on an area of 100,000 hectares. Special commissions are checking on the quality of the work. Detachments for soil fertility are also working hard, having decided to apply 10 tons of organic fertilizers to each hectare of arable land. The fields are being provided with mineral fertilizers more generously than in past years. Superphosphate granules are being applied to the soil along with first-class seeds of regionalized strains. The areas planted in corn that is harvested for grain in the oblast are increasing considerably and the areas planted in soybeans are being doubled. These crops will be cultivated for the first time according to industrial technology. Farmers of the Crimea intend to obtain no less than 2.1 million tons of grain this year. [Text] Moscow SEL'SKAYA ZHIZN' in Russian 4 Apr 80 p 1] 11772

SPRING WORK--Elista--The flag of spring field work was raised earlier than usual by farmers of one of the largest rayons in Kalmykiya, Iki-Burul'skiy. Striving not to waste a single hour of good weather, they were the first in the republic to bring all planting equipment and also soil cultivation equipment into the fields and they have retained the moisture on tens of thousands of hectares of arable land. They are conducting the harrowing and top-dressing of winter grain crops and feed crops simultaneously. Working in two shifts, the Iki-Burul'skiy workers have set themselves the task of harrowing all the arable land and the winter crops and also planting early spring crops in a record short time--50-70 working hours. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 25 Mar 80 p 2] 11772

ORGANIC FERTILIZER APPLICATION--Smolensk--Farmers of the oblast fulfilled the plan for the application of organic fertilizers ahead of schedule. They brought 7.3 million tons of peat compost onto the fields. Specialized detachments are engaged in delivering the organic fertilizers. They have more than 3,000 tractors and trucks at their disposal. The machine operators have resolved to apply more than a million tons of fertilizers to arable land in excess of the plan. [Text] [Moscow SOVETSKAYA ROSSIYA in Russian 4 Apr 80 p 1] 11772

IRRIGATED LAND--Saratovskaya Oblast--The farmers are especially concerned about irrigated land. There are now 360,000 hectares of this land in Saratovskaya Oblast. The area is immense and now it is important to make sure that it is used very efficiently. What is being done by those who show concern for a full return from the irrigated hectare not in words, but in deeds? On the vergin land Sovkhoz imeni Rodishchev in Novouzenskiy Rayon, now, ahead of time, even on frozen ground, as it were, during the winter, they have brought power pumping equipment to the steep banks of the Bol'shoy Uzen', and they have deployed the sprinkling machines and prepared them for operation. After the slight snow cover had melted, they began the first irrigation of perennial grasses, without delay, so as to augment the supplies of moisture. And it is really necessary to hurry. After all, on the sovkhos they intend to obtain 70 quintals of feed units from each of 3,300 hectares of irrigated fields, which is 5 quintals more than last year's level. "The weather this year is such that the farm had to begin spring work 3 weeks later than usual," says the first deputy chairman of the ispolkom of the Saratovskaya Oblast soviet of people's deputies, V. Usin. "And this means that it is necessary to shorten the planting times to the limit without reducing the requirements on the quality of the work. This spring there will be no lapse of time between the planting of early and late crops. We are grateful that our grain growers prepared well for field work. The technical equipment was prepared on time. They created 1,400 planting complexes. Practically all of the seed that was stored up are of the first and second class, and 74 percent of them are of the first class. One thing remains now: to work in the fields in such a way as to lay a firm foundation for the future crop. And the farmers of the oblast have made a large commitment: to harvest an average of no less than 17 quintals of grain from each hectare

and to deposit 3.5 million tons of grain into the grain bins of the homeland."
[Text] [Moscow IZVESTIYA in Russian 27 Apr 80 p 1] 11772

SPRING ON THE STEPPE--Odesskaya Oblast--The Black Sea steppe is awaiting spring. And it will not be easy for grain growers here. There was no rain in the autumn last year and the seeds of winter crops in many places were planted in dry soil, and only the scanty October and November rains rectified the situation to a certain degree. And winter was unusually snowless. So part of the winter fields will have to be replanted. The volume of spring field work will increase because of this, of course. In addition to "repairing" the winter fields, it will be necessary in a short period of time to plant the 600,000 hectares for spring spike crops alone! This is why control inspections are being conducted again and again everywhere these days: have everything been taken into account before going out into the fields, has everything been provided for? As a rule, the farms have comprehensive plans for field work. Technological charts have been drawn up for each field. They answer the questions of what, how and with what various things are to be done and at what times. And as soon as the night frosts disappear, the grain fields will be filled with the noise of motors. Odesskaya Oblast is one of the main suppliers of seeds of hybrid corn for the entire republic. Last year, with a plan for 58,400 tons, 74,000 tons of them were prepared. The oblast fully satisfied its own needs and delivered a sufficient quantity to other oblasts. "These seeds are already for planting," says the deputy chief of the oblast grain products administration, A. Poberezhets. "The plan for their calibration was fulfilled by 103.9 percent. They are now being shipped to the farms in mass quantities." The grain growers of the oblast have set high goals for the final year of the five-year plan. And now, on the threshold of spring, they are exerting all efforts so as to get a good start immediately and conduct all work in short periods of time and with high quality. [Excerpts] [Moscow IZVESTIYA in Russian 18 Mar 80 p 1] 11772

LATE SPRING--Zaporozhkaya Oblast--Spring came late to Zaporozh'ye. The snow has not left the grain in certain rayons of the oblast--which is not at all typical for this time of year. After all there has been times when the planting had been completed by now. But the snowy winter which had no sharp changes in temperature undoubtedly favored the farmers. It is now possible to say with confidence that all winter crops--and this means 755,000 hectares of them--withstood the winter well, which makes it possible to count on a good harvest. Spring crops will also occupy a fair amount of space. An area of 300,000 hectares has been allotted to them. Machine operators intend to conduct the planting in the shortest possible periods of time. All farms of the oblast have drawn up comprehensive plans for field work. They list everything, right down to the smallest detail: who should perform one agricultural job or another, to what extent, in which field, and in how many hours or days. The kolkhoz and sovkhos agricultural service also has its share of troubles. The preparation of seeds is being completed. On

the majority of farms they have been brought up to high conditions. The use of highly productive regionalized strains will make it possible to provide for an additional yield. This year special attention is being devoted to the production of valuable and strong wheats. Zaporozh'ye workers have made commitments for the final year of the five-year plan to obtain 3,235,000 tons of grain, to eliminate the indebtedness to the state for the last work year, and to provide all the forage and other supplies for the kolkhozes and sovkhozes. The farmers of the oblast are ready to go out into the fields, into the battle for a large grain crop in the final year of the five-year plan, the year of Lenin's anniversary. [Exerpts] [Moscow IZVESTIYA in Russian 29 Mar 80 p 1] 11772

COTTON PLANTING--Ashkhabad--Yesterday farmers of Ashkhabadskaya Oblast were the first in Turkmenistan to complete the planting of fine-hybrid cotton. This valuable crop occupies 79,000 hectares of fields. Green shoots have appeared on many sections and machine operators have begun cultivating the interrows. This year grain growers of the oblast are striving to obtain 84,000 tons of raw material of the highest grade. [Text] [Moscow TRUD in Russian 17 Apr 80 p 1] 11772

SNOW IN SOCHI--It has become unusual cold in the health resort city of Sochi. To everyone's surprise, the roofs of houses, trees, bushes, streets and squares of the city were even covered with wet snow. And although it melted quickly, mixed with the spring rain, the breath of winter is still felt in many things. One does not see the rapid blossoming of the fruit trees or the vigorous appearance of emerald greenery. Heavy clouds hang low over the Black Sea. There have been cold spells at this time of year in the past, of course," says the chief of the Sochi weather bureau, D. P. Lysak. "But there has not been weather like this for a half century. For the first time we registered in our journals on the night between 16 and 17 April a negative temperature-- -1 degree in Adlerskiy and Lazarevskiy Rayons. And while only wet snow with rain fell in the city itself, at Krasnoy polyane and on Ochishkho mountain in places only 600 meters above sea level, the snow cover was as much as 10 centimeters deep. This meteorological anomaly is explained by the strong onslaught of cold Arctic air into the Black Sea region. With speeds of 80-100 kilometers per hour, this northern stranger tore into the relatively warm masses of Black Sea air and cooled them, thus creating heavy cloudiness. But those who come here for vacation should not be disturbed. A warm spring sun will hang over Sochi again in the next few days. [Text] [Moscow TRUD in Russian 19 Apr 80 p 4] 11772

MASTERY AGAINST BAD WEATHER--Farmers of the Ukraina Kolkhoz in Kirovskiy Rayon in Krymkaya Oblast have begun to plant sunflowers. The area planted in this valuable oil-bearing crop has been increased by 100 hectares this year. The machine operators waited until the soil warmed to 8-10 degrees. But the weather turned cold. Finally the workers of the agrochemical laboratory gave the order: Take the sets of equipment to the fields. On the first day more than 100 hectares were planted. The tractor operators A. Molcahnov and A. Konivets are working efficiently and smoothly. True, the bad weather is still interrupting the work. But as soon as the rain stops and the soil dries out, the machine operators immediately continue the planting. [Text] [Moscow TRUD in Russian 23 Apr 80 p 2] 11772

UKRAINIAN CORN--Kiev--The areas planted in corn have been expanded considerably on the farms of the Ukraine, where they have begun mass planting of this grain and forage crop. The areas planted for grain alone will occupy almost 2 million hectares, which is almost 1.5 million more than last year. Industrial technology for cultivating this crop is becoming widespread on the fields. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 8 May 80 p 1] 11772

CORN PLANTING--Donetsk--Donetsk farmers have begun mass planting of corn, which occupies 180,000 hectares in the oblast. It will be cultivated according to industrial technology on one-third of all the area allotted for this grain and forage crop. This will make it possible to reduce expenditures on grain production to a minimum. Machine operators of the oblast intend to increase the gross yield significantly and obtain a 50-quintal yield from each planted hectare. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 8 May 80 p 1] 11772

WIDE-GRASP EQUIPMENT--Volgograd--Wide-grasp sets of equipment more than doubled the rates of work on the corn fields of the oblast. On the Archedinskiy Sovkhoz in Frolovskiy Rayon, for example, 10 of these sets of equipment prepared the soil on an area of more than 1,500 hectares in a day. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 8 May 80 p 1] 11772

KAZAKH CORN PLANTING--Alma-Ata--Mass planting for corn for grain has been started in the southern oblasts of Kazakhstan. [Text] [Moscow TRUD in Russian 27 Apr 80 p 1] 11772

IRRIGATED CORN FIELDS--Tashkent--The warm sun of March dried the irrigated land in Tashkentskaya Oblast and now the machine operators have taken out the sets of planting machinery. Corn growing has been developed especially extensively this year. This is because of the commitment of the animal husbandry workers of the oblast to sharply increase the production of meat, milk and other products. Farmers of the oblast have resolved this year to increase the production of "amber grain" to 146,000 tons -- 50,000 more than last year. This large increase in output will be achieved as a result of the assimilation of less valuable land and also by increasing the return from each hectare. [Text] [Moscow TRUD in Russian 28 Mar 80 p1] 11772

CATCHING UP--Severo-Osetinskaya ASSR--The late spring delayed planting work in Northern Osetiya this year. It was begun 2 weeks later than usual. In order to make up for lost time and conduct the planting within extremely short time periods, all the farms are combining technological operations and utilizing wide-grasp sets of machinery. Rural trade-union organizations of the republic have assumed control over the quality of the work. More than 200 mechanized detachments and teams have resolved to strive for a yield of 80-100 quintals of corn grain from each irrigated hectare this year. [Text] [Moscow TRUD in Russian 23 Apr 80 p 1] 11772

CORN PRODUCTION GOALS--Rural workers of Northern Osetiya have set high goals for themselves -- to harvest 165,000-170,000 tons of "gold" grain, which will require a yield of 34.5 quintals per hectare. There are 29 mechanized teams who are striving to obtain 70 quintals from each hectare and 11 have committed themselves to obtaining 100 quintals of grain per hectare. Industrial technology is being applied on 45,000 hectares. Each day the work is expanding on the corn plantations of the Northern Caucasus. The planting is in full swing in Dagestan and the Checheno-Ingushskaya ASSR. Machine operators are competing to mark the final year of the Tenth Five-Year Plan with large crops. [Excerpts] [Moscow SEL'SKAYA ZHIZN' in Russian 27 May 80 p 1] 11772

ON THE RICE PADDIES--Simferopol'--The prolonged spring caused rice growers of the Crimea many troubles. It was necessary to conduct the work on the paddies by fits and starts and to take the technical equipment to places where the soil had dried out. Thousands of hectares have already been planted in this valuable grain crop by farmers of the Pyatizernyy, Shturm Perekopa and Risovyy sovkhoses. This year it will be necessary to plant 20,000 hectares in rice in the Crimea. In order to accelerate the preparation of the soil and planting, enterprises of Sel'khoztekhnika and Soyuzsel'khozkhimiya have sent their tractors and other machinery to the farms. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 2 May 80 p 1] 11772

MECHANIZED DETACHMENTS--Zhitomir--For the first time in the oblast 40 mechanized detachments of the agrochemical service have taken on a considerable part of the spring grain growing problems. In a short period of time they delivered 1.5 million tons of organic fertilizers to the fields and applied mineral fertilizers to the soil on 30,000 hectares. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 28 Apr 80 p 1] 11772

MORE PRODUCTIVE RICE PADDIES--Vladivostok--Civil aviation pilots got the unusual spring "planting" underway on the fields of Primor'ye. Divisions of aircraft are applying mineral fertilizers from the air to the rice paddies of the sovkhoses of the Prikhankayskaya lowland, where snow has just fallen. This year the winged farmers have more work: The rice fields of the kray have been increased to 44,000 hectares. It has been decided to apply no less than a ton of fertilizers to each of them. This will help the Primor'ye farmers to increase the gross yields of this valuable grain crop. [Text] [Moscow PRAVDA in Russian 30 Apr 80 p 2] 11772

NEW STRAINS--Tashkent--Mass planting of grain has been started on the farms of Uzbekistan. Hundreds of sets of planting machines have gone onto the fields of Andizhanskaya, Ferganskaya, Kashkadar'inskaya and Surkhandar'inskaya oblasts where the sun has already warmed the soil. This season, 90,000 hectares of arable land have been allotted to spring spike crops in the republic -- 10,000 more than last year. The arsenal of grain growers has been augmented with the new regionalized strains of Krasnovodopadskaya-210 wheat and Sholpan barley. As tests showed, under conditions of dry, nonirrigated land they produce rich yields of grain -- more than 20 quintals per hectare. These strains have made it possible to move the grain fields of the foothill zone of Zaaminskiy Rayon. [Text] [Moscow IZVESTIYA in Russian 13 Mar 80 p 1] 11772

RIPE WINTER CROPS--Ashkhabad--The warm summery weather that came after abundant rains accelerated the ripening of winter grains in the south of Turkmenistan. The barley spiked out and the wheat entered the stem extension stage. Winter crops occupy 86,000 hectares in the republic this year. It is intended to gather no less than 20 quintals of grain from each of them. The harvest time will begin as early as May. [Text] [Moscow TRUD in Russian 27 Apr 80 p 1] 11772

SNOW ON APPLE BLOSSOMS--Yerevan--Even many old-timers of Yerevan cannot recall when snow has fallen in the middle of May here. This has only been observed twice in the last 100 years -- in 1926 and 1941. Unusually April in the republic is a time of blossoming of the fruit trees and the air is warmed to 20-25 degrees at this time of year. It is truly unusual to see snow on the green leaves. The deepest snow cover -- up to 25 centimeters -- was registered in the mountainous regions of the republic. The thermometer there showed 9-12 degrees below zero. The temperature of the soil in the Ararat valley dropped to minus 2 degrees. The Administration of the Hydrometeorological Service and Environmental Control announced that the snow fall in Armenia was caused by the movement of cold masses of air into the Transcaucasian area from the central European regions of the country. Although they have already passed, the remaining cold air can possible cause snow to fall. There will be frosts in places. Agricultural workers have met the unfavorable weather in an organized way because they were warned ahead of time about the severe cold spells. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 18 Apr 80 p 4] 11772

WINTER CROP DRESSING--Ivanovo--Farms of Furmanovskiy and Palekhskiy rayons, where snow has just fallen, have begun top dressing of winter crops with agricultural aviation crews. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 28 Apr 80 p 1] 11772

MOSCOW GRAIN CROPS--Moscow--Winter grain crops of the Moscow area are growing more and more rapidly. The inspection of the condition of areas planted in winter crops which was completed yesterday showed that they have withstood the winter well and have vigorously renewed their growth. [Text] [Moscow TRUD in Russian 27 Apr 80 p 1] 11772

DON FIELD WORK--Rostov-on-Don--Grain growers of the Don have greeted the First of May with worthy labor achievements. As was intended, they planted early grain and pulse crops in extremely short periods of time and with high quality. They occupy 926,000 hectares. On two-thirds of the area the planting was conducted simultaneously with the application of fertilizers and more than 1.5 million hectares of winter crops were top dressed. The field work must be done under difficult weather conditions. The farmers are demonstrating high mastery and are skillfully maneuvering technical equipment. High labor productivity on the spring fields can be seen on the farms of Peschanokopskiy, Azovsky, Millerovski, Bokovski, Tatsinskiy, Aavetinskiy and other rayons where the planting of early crops was conducted in 50-70 hours. Success is ensured by comprehensive organization of labor and 24-hour operation of the sets of equipment. These days more than 2,000 tractor-planting complexes and detachments are operating on the fields of the Don area. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 28 May 80 p 1] 11772

LATVIAN PLANTING--Riga--The report of the first tens of thousands of planted hectares was submitted in Latvia. The grain growers promptly began mass planting, even though the snow remained on the fields longer than usual. Each farm has carefully checked the sections on which the soil dries out most quickly and immediately took technical equipment onto them without missing the best agrotechnical time periods. Having thought out the planting strategy in detail, the farmers intend to complete it earlier than they did last year. Under the leadership of the best specialists of the farms, the work in the fields is being done by about 800 comprehensive technological detachments which are organized according to the Ipatovo method. The experience of past years has helped to arrange a continuous planting conveyor. Coordination among soil cultivation, planting and other specialized teams has been organized everywhere. The drivers of powerful tractors have taken only wide-grasp and combined sets of equipment out onto the fields. They will have to work hard and on two shifts. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 25 Apr 80 p 1] 11772

SPRING FIELD WORK--Saratovskaya Oblast. The Saratov workers have to harvest 10,000 tons of oleaginous soya beans this year. This crop is being raised on sizeable areas for the first time on many farms in Balakovskiy, Yershovskiy, Marksovskiy, and Engel'skiy rayons. Thus special training preceeded the sowing operations. Scientists and specialists of the agricultural institute met directly with the soya raising teams. Farms in Krasnokutskiy, Arkadakskiy, Rovenskiy, Samoylovskiy, Krasnoarmeyskiy, and Tatishevskiy rayons are sowing grain crops and sunflowers at a fast pace and on a high level. In places where the preparations for spring are conducted properly, spring crop sowing, as a rule, takes place simultaneously with mineral fertilizer application. As you know, this agricultural method speeds up field work significantly and has a positive effect on yields. For agricultural workers in the Povolzh'ye this has been a spring characterized by weather conditions which have disrupted the traditional notion of sowing schedules. Exceptional efficiency and maneuverability and a high level of organization and technological discipline have been needed to complete it successfully. [Excerpts] [Moscow SOVETSKAYA ROSSIYA in Russian 17 May 80 p 1] 7990

CORN PLANTING--Moldavian SSR--Comprehensive planting of corn with simultaneous application of herbicides was started by corn growers of the Vinogradar' Sovkhoz-Plant in Kagul'skiy Rayon in Moldavia. As soon as the weather became suitable they were the first to bring sets of planting equipment out onto the fields. The seeds are being placed in carefully cultivated and fertilized soil. The soil is then packed with rollers in order to retain the moisture. Sunflowers are being planted at the same time as the corn. Six sets of planting equipment which are combined into three teams are working the fields. The workers' committee sums up the results of the competition daily and announces the winners. The machine operators are striving to complete the planting rapidly and with high quality. [Text] [Moscow TRUD in Russian 23 Apr 80 p 2] 11772

VEGETABLE OIL--Stavropol'--Up to a ton of vegetable oil can be obtained from each hectare planted in sunflowers. This is how much machine operators of the Rossiya Kolkhos have promised to harvest this year. The plans of the advanced workers were taken as a reference indicator by many farms of the kray: The planting is being conducted by the square-nest method almost everywhere. This year Stavropol' workers are planting one-seventh of the spring fields in sunflowers. The planting is to be completed in a week. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 27 Apr 80 p 1] 11772

SUNFLOWER PLANTING--Kishinev--The planting of sunflowers was completed yesterday by machine operators of Moldavia. One of the main industrial crops of the republic, it occupies 180,000 hectares of arable land. Industrial technology was used for the first time half of this area, so that manual labor is eliminated and mechanical cultivations are reduced to a minimum. [Text] [Moscow IZVESTIYA in Russian 6 May 80 p 1] 11772

MORE SUNFLOWERS--Ordzhonikidze--The farms of the foothill regions of Northern Ossetiya have begun mass planting of sunflowers. This season the area planted in this oil-bearing crop is being considerably increased. Seeds of the promising new, highly productive Pervenets strain of sunflowers are being planted in well cultivated and moist soil. [Text] [Moscow IZVESTIYA in Russian 29 Apr 80 p 1] 11772

SUNFLOWER HYBRIDS--From Soviet strains of sunflowers with record amounts of oil content, Romania, France and other countries have isolated very valuable self-pollinating lines for creating highly productive hybrids. One of these hybrids, Start, was recently isolated by selection workers of the Bulgarian Institute of Wheat and Sunflowers. As tests have shown, the new hybrid is distinguished not only by good productivity of seeds with high oil content, but also by fairly good resistance to a whole number of dangerous diseases and pests. The Start hybrid of sunflower has been regionalized in a number of zones of Bulgaria. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 15 Mar 80 p 3] 11772

DIFFICULT YEAR--1979 was very difficult. The severe winter and then the drought on a considerable territory of the country had a serious effect on the fulfillment of planned assignments for the production of agricultural products, especially grain crops. But even under these exceptionally difficult conditions we have harvest 179 million tons of grain this year. Many krays, oblasts and republics managed to achieve good results. Farmers of Krasnodarskiy Kray, counteracting the bad weather with efficiency and organization in their work, mastery and shock labor, obtained an average of 31.4 quintals per hectare of spike and pulse crops. They poured 3.5 million tons of grain into the grain bins of the homeland, including 2 million tons of strong and valuable wheat. Grain growers of Northern Osetiya and Dagestan overfulfilled state plans for grain procurements. [Excerpt] [Krasnodar SEL'SKIYE ZORI in Russian No 12, Dec 79 p 2] 11772

WHEAT SOWING FOR SEED--Kurgan--The sowing campaign has crossed the Siberian threshold: the machine operators on farms in the southern part of the oblast have commenced the early sowing of wheat for seed. Fallow and well fertilized weed-free tracts have been made available for this purpose. [Text] [Moscow TRUD in Russian 7 May 80 p 2] 7026

FLAX SOWING IN UKRAINE--Rovno--The farmers in Rovenskaya Oblast have introduced into operations the complete mechanization of flax cultivation work. This has enabled them to overcome successfully the caprices of this current spring period and yesterday they became the first in the Ukraine to complete their sowing of flax. [Text] [Moscow TRUD in Russian 7 May 80 p 2] 7026

MAXIMUM USE OF MACHINES--Ul'yanovsk--The Ul'yanovsk machine operators are utilizing the technical potential of their machines and mechanisms to the maximum possible degree in carrying out the mass sowing of their spring crops. The combining of technological operations is being employed extensively on many farms. [Text] [Moscow TRUD in Russian 7 May 80 p 2] 7026

INITIAL GRAIN YIELDS--Tashkent, 16 May--The grain crops have ripened in southern Uzbekistan. As always, the first to cut down their barley were the machine operators in Surkhander'inskaya Oblast. The combines have been moved out onto the fields in Angorskiy, Dzharkurganskiy, Sherabadskiy and other rayons. A fine crop has developed this year. The brigade headed by M. Khaliyaron at the Kolkhoz imeni Kuybyshev in Angorskiy Rayon is obtaining 45-48 quintals of grain from each irrigated hectare. Similar yields are being obtained at the Kommunizm and Sotsializm kolkhozes and at the Surkhan Sovkhoz in Dzharkurganskiy Rayon. After they have been harvested, the fields are immediately sown in corn for grain. In a day or two the combines in other oblasts of the republic will be moved out onto the fields. This year the farmers of Uzbekistan have vowed to obtain 3 million tons of grain. [Text] [Moscow PRAVDA in Russian 17 May 80 p 1] 7026

SNOWFALL IN MAY--Unusually cold weather prevailed during the middle of May over a large portion of the European territory of the country. We were

informed by the USSR Gidrometsentr [Order of Lenin Hydrometeorological Scientific-Research Center] that sharp fluctuations in temperature occur from time to time during the month of May. Although it is already hot in the southern part of the country at this time, cold weather still continues in the northern regions. The contrasts in temperature bring about rapid movements of air masses, thus allowing cold arctic winds to penetrate through to the shores of the Black Sea and Moldavia, as is presently the case. Air masses which moved down from the Barents Sea currently dominate the skies over Moscow. Thus on 13 May the temperature in the capital dropped to zero and minus one degree and a wet snow fell. Such cold weather has occurred at this time of the month in the past. Approximately six degrees of frost were recorded on 14 May 1919. At times, the cold weather even makes an appearance during the summer, as it did, for example, on 12 June 1899 -- minus two degrees. The cold weather is expected to continue for 2 days and thereafter the temperature will gradually rise, with warm spring weather returning to Moscow. [Text] [Moscow TRUD in Russian 14 May 80 p 4] 7026

SPRING FIELD WORK--Spring sowing work continues on farms throughout the republic. Despite cold snaps and inclement weather, the work is being carried out at a high tempo by technological detachments in Talsinskiy, Kuldigskiy and Ventepileskiy rayons, where more than one half of all of the spring crop fields have been sown. Many farms in these rayons are already completing and a portion -- have completed their sowing of spring grain crops. The leaders in the sowing work are the farmers of the Taisy Agroindustrial Association. Almost two thirds of all of the spring crops have been sown here, including 84 percent of the grain crops. However the work tempo must still be raised considerably. Thus, on the previous day the area of grain crops sown increased by only 1 percent. Complicated conditions are being experienced in a portion of the rayons in which snow fell. For example, only 14 percent of the grain crops have been sown in Balvskiy Rayon. The caprices of the weather must be countered by a high level of organization, skilful maneuvering of the equipment and strenuous effort. Use must be made of every available opportunity for accelerating the sowing work. The sowing of perennial cover grasses is being carried out in all of the rayons (here again the Taisy farmers are the leaders). A top dressing has already been applied to more than one half of the winter fields. On the whole, the spring field work is being carried out more rapidly this year than was the case last spring. For example, 9 percent more spring crops have been sown than were sown by this same time last year. Nevertheless, the work tempo is still lower than it should be. Less than one half of all of the available tractors are being employed out on the fields. More strenuous effort is required if the sowing work is to be carried out during the optimum periods. The example being set by the leading farms reveals that the course of the spring sowing operations can be accelerated considerably. [Text] [Riga SOVETSKAYA LATVIYA in Russian 6 May 80 p 1] 7026

RICE IN PRIMOR'YE--Vladivostok, 3 May 80--The specialized sovkhoses of Primor'ye have begun the mass sowing of rice. It is taking place basically on new plots in the enterprises of the Prikhankayskaya Lowlands. They were put into operation at the beginning of the season by the land reclamation workers of the all-union shock komsomol building group, which is creating a large rice-farming region in the southern part of the Far East. Sowing complexes have been created in all rice-sowing sovkhoses. Leading machine operators from the kray's cities have come to help. The Primor'ye has decided to give the country a record quantity of grain during the final year of the five-year plan--no fewer than 85,000 tons. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 4 May 80 p 1] 8228

DOUBLE SHIFTS--Ivanovo, 3 May 80--The hum of motors on the oblast fields does not cease. There are 320 mechanized complex detachments working in kolkhozes and sovkhoses. Their goal is to lay a firm foundation for the harvest and to increase grain yield by 4.5 quintals per hectare. The sowing complexes of the kolkhozes and sovkhoses in Ivanovskiy, Sokol'skiy, Zavolzhskiy, Il'inskiy and other rayons are working constantly, in double shifts. Grains and feed crops have received 1.2 million tons of compost more than last year. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 4 May 80 p 1] 8228

CHUVASH GOALS--Cheboksary, 29 Apr 80--The farmers of the Chuvash ASSR have actively joined the fight for a large harvest during the final year of the 10th Five-Year Plan. This year they plan to produce no fewer than 23 quintals of grain per hectare of crops. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 30 Apr 80 p 1] 8228

DOUBLE SHIFT NORMS--Penza, 29 Apr 80--Spring work has come to the fields of the oblast. Without waiting for the readiness of the soil on large areas of land, enterprises are beginning field work selectively. They are seeking out other resources for curtailing the sowing period. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 30 Apr 80 p 1] 8228

CORN CROP IN UKRAINE--Kiev SIL'S'KI VISTI in Ukrainian on 13 May 1980, page 1, carries a 400-word article on the efforts in Kiyevskaya Oblast to grow an abundant corn crop despite this spring's adverse conditions. Corn for grain occupies 60,000 hectares here, of which 20,000 hectares is being grown via the improved industrial technology. Corn growers in Kiyevskaya Oblast are trying for a yield of 45-50 quintals per hectare. Kiev SIL'S'KI VISTI in Ukrainian on 21 May 1980, page 1, carries a 1,200-word article on corn planting in Cherkasskaya Oblast. The growing of corn via the improved industrial technology has been expanded from 2,000 hectares in Cherkasskiy Rayon in 1979 to 20,000 hectares in 10 rayons in Cherkasskaya Oblast in 1980. On hectareage where the new technology is being applied corn growers are trying for a yield of 60-65 quintals per hectare. This will be an important part of Cherkasskaya Oblast's plan to grow 430,000 tons of corn. Corn has been given priority in reseeding part of the winter crops. The sown area is being expanded at the expense of less high yielding spring crops. Thus the area sown to corn is being expanded to 100,000 hectares. [Editorial Report]

FIELD WORK PROGRESS--Stavropol'skiy kray--In spite of frequent rains, the Petrovskiy Kolkhoz "Pobeda" was able to plant sunflowers in the time calculated and the planting of corn covers 1,900 hectares. The majority of the Stavropol' beet-producing and corn-producing farms are completing their planting. The Ipatovskiy method again helped to speed up the process and improve quality. The machine operators and the specialized service shops are struggling to produce the biggest harvest yet in this last year of the five-year plan; to sell more than one million tons of sugar beets and 55,000 tons of high quality seed corn to the state. [Excerpt] [Moscow SEL'SKAYA ZHIZN' in Russian 13 May 80 p 1] 9233

WHEAT SOWING--12 May--More than half a million hectares of the oblast--100,000 hectares more than last year,--are sown with wheat. There is competition for the fastest sowing time of grain crops. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 13 May 80 p 1] 9233

OLIVE OIL--Kirovograd, 12 May--Due to industrial technology, the valuable olive oil cultivation covers 35,000 hectares, one-fourth of all cultivated fields. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 13 May 80 p 1] 9233

GRAIN CROPS--Tula, 12 May--The first to report completed sowing of early grain crops were the workers of the largest grain-producing rayon of the oblast, Efremovskiy. Later sowing is being done in Volovskiy, Uzlovskiy, Teplo-Ogarevskiy and other rayons. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 13 May 80 p 1] 9233

CORN PLANTING--Kurgan-Tyube, 12 May--The planting of corn on the farms of the Kumsangirskiy, Shaartuzskiy, Kabodiyonskiy rayons cheers the eye. The workers hoe, weed and fertilize. The work is especially successful where feed production is an independent branch. There are more than 20 specialized brigades in Kumsangirskiy Rayon. The corn-producing rayons are committed to producing 60-80 quintals of grain and 600 quintals of silage. The workers of the Kurgan-Tyubinskiy Oblast have the best harvests of the republic. The irrigated fields here give two harvests. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 13 May 80 p 1] 9233

TIME USED EFFICIENTLY--Lutsk, 28 Apr 80--The oblast's kolkhozes and sovkhoses have completed the top-dressing of winter crops as well as the sowing of early grains. Although spring hindered the movement into the fields, more flax and sugar beets have been sown and more potatoes planted than at the same time last year. Village workers are utilizing technology hourly at a high rate of productivity. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 29 Apr 80 p 1] 8228

CSO: 1824

LIVESTOCK FEED PROCUREMENT

OUTSTANDING ACHIEVEMENTS OF LEADING LIVESTOCK BREEDERS

Moscow TRUD in Russian 22 Mar 80 p 1

[Interview with V.M. Tsybul'ko, first secretary of Kiev obkom, by S. Prokopchuk, TRUD correspondent]

[Text] For the third time in a row under the current five-year plan, the challenge Red Banner of the CC CPSU, USSR Council of Ministers, AUCCTU and CC of the Komsomol, has been awarded to Kiev Oblast for its achievements in the 1979 socialist competition. The livestock breeders made a sizable contribution to the achievements of the workers of this oblast.

S. Prokopchuk, correspondent of TRUD, asked V. M. Tsybul'ko, first secretary of the Kiev obkom of the Communist Party of the Ukraine, to tell about the work of the farm workers of Kiev Oblast.

[Question] Under the last two five-year plans, milk production has increased by 1.7 times, meat production by 1.6 times and egg production by 2.8 times in the farms of this oblast. How did the livestock workers obtain these achievements?

[Answer] There are several circumstances involved here. Stage-by-stage and persistent work is being done in this oblast on specialization and concentration of production on the basis of interfarm cooperation, which is becoming increasingly extensive and yielding positive results: there has been a significant increase in number of cattle, purity and productivity of stock.

Last year, milk production constituted 684 centners per 100 hectares and meat production 135 centners. The livestock breeders of Kiev Oblast fulfilled the assignment of 4 years of the current five-year plan in September of last year with regard to selling the State all types of livestock products. The mean annual sales increased, for example, by 18% for meat, 26% for milk and 52% for eggs.

[Question] What are the objectives for this year?

[Answer] Our plans were determined by the decisions of the July (1978) plenum of the CC CPSU. In implementing them, the livestock breeders have set the following goal: to achieve this year indicators that exceed the level for last year and to fulfill, by the third anniversary of the Constitution of the USSR, the five-year plans for procurement of all types of livestock products, to sell 100,000 more tons of meat than planned, 350,000 more tons of milk, 425 million eggs and 100 tons of wool over and above the planned amounts.

I am sure that the farm workers will reach their goals. But even now, Party, soviet and economic agencies, trade unions, komsomol organizations and all of the working people in this oblast are working to develop a reliable base for accelerated development of the livestock industry in the future as well. It is planned to bring the number of head of cattle up to 1.60 million, i.e., 100 head/100 hectares of farm land, in the next few years.

[Question] Of course, a solid feed base is needed to reach such goals?

[Answer] Definitely. Today's achievements were largely attributable to the fact that the farms are seriously, thoroughly and economically engaged in feed production. A complex program was prepared in this oblast to augment production and improve the quality of feed.

[Question] What is the substance of this program?

[Answer] It is based on steps for intensification of field feed production and increasing productivity of natural feed fields, broad introduction of progressive technology for production, storage and processing of feed. In our region, feed production is becoming a specialized sector. Farms have been created for the production and processing of feed, as well as interfarm enterprises.

Further development of the feed industry on an interfarm basis will proceed on the route of converting mixed feed plants into large combines which, in turn, will become elements of interfarm associations for feed production.

[Question] Is this a plan, or are there already such enterprises?at work?

[Answer] At present, there are nine such associations, and under the 11th Five-Year Plan they will be organized in each rayon. For example, the Polesskoye enterprise was created by 11 kolkhozes and 2 sovkhozes. They transferred to it more than 6000 hectares of floodplains. There are a mixed feed plant, lines of granulated grass and conifer meal, high-power grain dryers and other agricultural technology at the disposal of the association. All of the work--spreading fertilizers, sowing grass,

harvesting and processing it, care of perennial pastures--is done by the association's machine operators. In the future, the enterprise will be able to produce over 55,000 tons of feed.

The distinctions of this oblast must also be taken into consideration. Here, all of the land has been plowed, and intensive use of the fields deprives the farms of the possibility of increasing the area used for feed crops; our cattle is kept in stalls around the clock. For this reason, the only means of fully supplying public cattle with feed is to augment the feed yield per hectare.

Experience convinces us that wherever feed production was promoted to the rank of one of the most important sectors of the economy the achievements in the livestock industry are stable and impressive. The Ploskovskiy sovkhos in Brovarskiy Rayon harvested 1289 centners per hectare of feed beets, 580 centners of green corn mass and 509 centners of perennial grass last year. It is expressly the solid feed base, with a high level of pedigree breeding work, that enables this farm to produce annually more than 2400 centners of milk per 100 hectares of land, with a mean yield of over 5000 kg milk per cow.

Today, the main objective of the rural workers is to carry the cattle over the winter and celebrate in a worthy manner the 110th anniversary of the birthday of V. I. Lenin. They will continue to multiply their achievements in order to successfully end the five-year plan, to deliver more agricultural products to the nation.
[315-10,657]

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CSO: 1824

LIVESTOCK FEED PROCUREMENT

NEW SOURCE OF LIVESTOCK FEED

Moscow SOVETSKAYA TORGOVLYA in Russian 20 Mar 80 p 2

[Article by Z. Siradzhev, chairman of the board of the Uzbek Union of Consumer Trade Cooperatives: "Our New Industry--Growth of Number of Cattle in Livestock Fattening Farms"]

[Text] In the last few years, there has been marked development of a new area of endeavor in consumer cooperation in Uzbekistan: fattening of livestock at subsidiary farms. This is an important source of increasing meat resources.

In the 180 farms of this republic, the cooperative herd numbers about 100,000 head of cattle, sheep and goats, and 10,000 hogs. In addition, almost 1.5 million chickens and ducks are being raised. Last year, more than 50,000 tons of dressed meat was produced in the livestock fattening farms of Uzbek potrebsoyuz [union of consumer trade cooperatives].

Let us refer to the knowhow of the personnel at the livestock fattening farm of Srednechirchikskiy raypo [rayon consumer cooperative society], in Tashkentskaya Oblast, which instigated the extensively deployed socialist competition among the republic's cooperative workers. This enterprise achieved high results in the production of meat and obtaining weight gains by means of effective use of feed, particularly food scraps [waste], and good care of the livestock. At this farm, the cost per centner of weight gain does not exceed 100 rubles. There, up to 4500 head of cattle are fattened annually, and almost the same amount of sheep and goats. A hog farm has been erected, and three incubators with a capacity of 165,000 eggs have been put in operation.

The brigade headed by Abdurakhim Radzhabov, bearer of the Order of the Red Banner of Labor, has achieved the best results in the socialist competition. Each livestock hand takes care of 80-100 head of cattle, and the mean daily weight gain constitutes 800-900 grams.

The knowhow of this progressive farm has been thoroughly studied and extended to all cooperative subsidiary farms. Moreover, many of the administrators of livestock fattening farms have visited it and become personally acquainted with the progressive technology of obtaining cheap livestock products.

The poultry plant recently created within the Ordzhonikidzevskiy Rayon potrebsoyuz in Tashkentskaya Oblast, where up to 200,000 chickens can be kept at one time, has become a major base for poultry production. At the present time, there are eight such poultry plants under the Tashkentskaya Oblast potrebsoyuz. They regularly deliver many tons of fresh poultry to the stores of the city.

A livestock complex has been developed under the Kuvinskiy Rayon potrebsoyuz, where up to 1000 head of cattle and 2500 head of sheep can be kept at one time. In addition, there is an incubator station and poultry farm.

Serious attention is being given to development of their own feed base. Last year, 8500 tons of coarse and succulent feed was raised on 200 hectares of arable land. Wide use is made of food waste in the diet of cattle.

This serious and rational approach to development of the material and technical base of the new sector is inherent in all potrebsoyuzes. In 3 years, more than 200 livestock buildings were erected, which can hold 30,000 cows and sheep, by the Uzbek potrebsoyuz, using cooperative funds, as well as Gosbank loans. Wide use was made of cheap, local building materials.

There has also been appreciable progress in creating a reliable feed base for these farms. Local Party and soviet agencies provided substantial assistance in solving the problems of cooperative workers. A total of 12,000 ha of land was allocated to the farms for the production of their own feed. Each year, the consumer cooperative farms are provided with concentrated feed and cotton seed pods.

The board of the Uzbek potrebsoyuz constantly devotes attention to this sector. At its meetings, it hears the reports of oblast cooperative organizations concerning development of cattle fattening farms, analyzes the situation and offers concrete assistance to eliminate any occurring flaws.

Having rated well the performance of cooperative organizations with regard to meat production, the CC of the Uzbek Communist Party and government of this republic has put a task to us: to further expand cattle fattening and increase meat production. All of the local resources will be used to achieve this. But we also need the help of the Tsentrosoyuz [Central Union]

of Consumer Societies] to supply such farms with agricultural technology, equipment, special transport and machinery. Development of poultry farming makes it imperative to develop our own incubator stations. We shall not be able to solve this problem on our own.

The cooperative workers of Uzbekistan and personnel of cattle fattening farms who have joined in the All-Union socialist competition will do everything they can to fulfill the tasks put to them of increasing the production and sale of meat to the public.

[315-10,657]

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CSO: 1824

LIVESTOCK FEED PROCUREMENT

COLLECTION OF FOOD WASTE FOR LIVESTOCK FEED

Moscow SEL'SKAYA ZHIZN' in Russian 12 Feb 80 p 4

[Article by V. Zhurkov, head of the Main Administration for Labor and Social Problems of the USSR Ministry of Agriculture: "Stocking Food Waste"]

[Text] V. Korolev from Vladimirskaya Oblast writes: "Previously, we paid 9.50 rubles per ton to collectors of food waste. In 1978, we began to pay them 7 rubles, and now all payments have stopped, and these funds are transferred to the State budget. What is the correct way to make payments?"

Collection of food waste among the public, from trade enterprises and public eating facilities, sanatoriums, rest homes, hospitals, children's and other institutions is an important source for augmenting the reserve of cheap and nutrient feed, particularly for fattening hogs in suburban sovkhoses and cattle fattening farms. For this reason, a material incentive must be provided for waste collectors to advance this goal. The procedure for payments should be as follows.

In accordance with the statute adopted by the USSR Ministry of Agriculture in coordination with the USSR State Committee for Labor, the labor of workers who collect food waste from communal housing and hospitals are paid at the rate of 11 rubles per ton gathered and delivered to livestock fattening farms. The food scrap collector (cleaning person, yardman, etc.) is directly paid at least 9.50 rubles per ton, while the rest of the monies are spent to pay other employees at communal housing facilities and hospitals (supervisor technicians, building [house] managers, etc.) who are directly involved in organizing waste collection.

Additional remuneration at the rate of 3 rubles per ton food waste gathered from trade and public eating enterprises, sanatoriums, rest homes, children's and other institutions is paid to the employees of these enterprises and institutions.
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LIVESTOCK FEED PROCUREMENT

LEGAL ASPECTS OF INCREASING QUANTITY, QUALITY OF LIVESTOCK FEED

Moscow SEL'SKAYA ZHIZN' in Russian 13 May 80 p 4

[Article by R. Bogdan-Blakitnyy, deputy head of the Main Administration for Labor and Social Problems, USSR Ministry of Agriculture: "For Quantity and Quality"; column published by the Legal Administration of the USSR Ministry of Agriculture]

[Text] O. Belova, from the Ferzikovo sovkhos in Kaluzhskaya Oblast writes: "Recently, a decree was published in the press, which is directed not only toward increasing feed production, but upgrading its quality. What steps are provided to advance feed quality?

The recently adopted decree of the CC CPSU and USSR Council of Ministers "On additional steps to increase production of coarse and succulent feed in 1980 and to improve its quality" describes steps to increase feed production and particularly to improve its quality.

The decree recommends that directors of sovkhoses and other State agricultural enterprises make broader use in 1980, in work dealing with procurement of feed, of lump wage payment for work done to complete a job (ton of hay, hayage, silage and other feed) and to make more use of the resources of the material incentive fund as rewards for workers involved in feed production.

It has been deemed purposeful, in determining the lump payment per ton of hay, silage, hayage and other feed, to include a bonus, in addition to the schedule of the wage fund, for quality and time of completion of work, a bonus for gathering the harvest, in order to increase the material interest in procuring high-quality feed and to simplify accounting. The size of the additional payment for quality and time of completion of work, as well as the higher payment for gathering the harvest are differentiated, depending on the quality (grade) of feed. For example, for procurement of first grade feed, the remuneration will be about twice as high as for ungraded feed.

At the present time, the bonus for quality and time of completion of work pertaining to raising feed crops is 1.5 times the regular wages. While the sum of additional payment could not exceed a worker's monthly wages in any 1 year before, now the amount has been raised to the equivalent of 1.5 months of piece-rate [or job-rate] earnings, i.e., as is done for cultivated crops.

There has also been an increase in the higher wages for gathering the feed crop harvest. While the higher payment to tractor and machine operators before 1980 was increased for the first 10 days of mass gathering in farms of Siberia, the Far East, virgin lands of Kazakhstan, the Urals and Povolzh'ye, with the exception of the Non-chernozem region of the RSFSR, by 60%, and in farms of other regions by 30%, at present this increased remuneration is 100% and 60% higher, respectively, provided first and second grade feed is produced. Thus, gathering feed crops is equated in significance to gathering grain and other agricultural crops of the greatest importance.

Settlement must be made with workers of brigades, detachments and units, in accordance with lump wage payment estimates, after delivery and crediting of feed, and in the presence of a document on the results of analysis of feed quality. Before settlement in accordance with the lump wage estimate, one can make payments for labor on a time basis (not by the job), for the time they have worked in accordance with the scheduled wages in sections 3-5. Tractor and machine operators of first and second classes receive a bonus for their class category in the appropriate proportion of the advance given on a time basis.

As before, bonuses for production (at the rate of 125% of the schedule) will be paid to workers after totaling up the amount of feed and other products gathered by the brigade, as well as after completing the most important parts of the work pertaining to incomplete production.

Use of the resources of the material incentive fund, which are available in each sovkhov, is important to increase the material interest of workers in upgrading the feed. It would be desirable for a specific bonus to be remitted directly for each ton of first and second grade feed, in a differentiated manner according to its nutritional qualities, when preparing the conditions for awarding prizes to workers for procurement of feed.

The directors of sovkhovs and other State agricultural enterprises have the right to award prizes in 1980 to workers for exceeding the mean annual level of production reached in the 5 preceding years, in amounts of up to 30% of the cost of the feed procured over and above this level of production, provided it is of high quality.

It is recommended that kolkhozes use the above incentives, as well as the system of higher pay for gathering and procuring feed that is in effect for sovkhov workers.

LIVESTOCK FEED PROCUREMENT

REPORT ON FEED CROP PROGRESS IN SOUTHERN UKRAINE

Moscow PRAVDA in Russian 29 Apr 80 pp 1-2

[Article by A. Kucherenko: "The Feed Crop Fields of the Black Sea Area"]

[Text] The hum of tractors can be heard over the plains of the Black Sea area. Planting is in progress in the south of the Ukraine -- the farms of Odeskaya, Nikolayevskaya, Khersonskaya and Krymckaya oblasti. Seeds of early spring crops, alfalfa and sugar beets are being placed in the soil. The spring was late and the bad weather created difficult conditions on the fields. It will be necessary to plant late crops along with early ones. Farmers have had to adjust their work plans and conduct the planting 24 hours a day. In a situation like this it is important to value each hour and minute, to display good organization and mastery. Many farms are successfully surmounting the difficulties and completing the planting during optimal time periods.

Concerned primarily about increasing grain production, managers and specialists of kolkhozes and sovkhoses assign an important place to fields planted in feed crops. In recent years in a number of southern rayons of the Ukraine the milk yield and the weight gain of livestock have been decreasing. This decrease is especially appreciable in Nikolayevskaya and Khersonskaya oblasti. What is the matter? One of the main causes is the poor rations. And yet there are good possibilities here of creating full-value supplies of forage. More than half of the republic's irrigated land is on the steppes of the Black Sea area and in the Crimea. Large irrigation systems are in operation and others are being constructed, and the deliveries of mineral fertilizers and technical equipment have increased. But the hectares planted in feed crops are not distinguished by generosity. Moreover, the structure of the planted areas is imperfect. Frequently the land is occupied by "traditional" annual grasses which do not guarantee large yields.

Still, there are many farms in the oblast where problems of feed production are being solved successfully. Just take the Kolkhoz imeni Kirov in Skladovskiy Rayon in Khersonskaya Oblast. The fields of the farms spread

over broad areas. One after the other, the sets of planting equipment are disappearing into the slightly haze-covered distance.

"We are planting alfalfa," says the chairman of the kolkhoz, Hero of Socialist Labor L. Davydenko. "The crop is irreplaceable. We have been convinced from experience how effective it is."

One has occasion to hear this opinion repeatedly. The areas planted in alfalfa have been expanded recently on many kolkhozes and sovkhoses. As a result, the farmers are creating good supplies of forage, and this is a guarantee of high productivity of the livestock. On this same Kolkhoz imeni Kirov the milk yield from each cow has reached 4,455 kilograms. The young bulls are being released with a weight of 450 kilograms.

There are numerous examples like these. This kind of work is being carried out successfully, for example, in Krymaka Oblast.

"We are constantly improving the structure of the areas planted in feed crops," says the first secretary of the Krymaka Party Obkom, V. Makarenko. "We are reducing the areas planted in annual crops and replacing them with perennial grasses. Practice has shown that this is a good policy: in the leading rayons we are obtaining 450-500 quintals of green mass of alfalfa per hectare."

It would seem that there is no need to convince anyone of the value of this crop, or of sainfoin either. In addition to having good nutritive properties, they are excellent predecessors for grain crops. They are also good for all crop rotations on irrigated land. Specialists recommend that no less than one-fourth all the area be planted in perennial grasses, and half of the area used for feed crops should be.

But we are still a long way from this ratio. In Odesskaya, Nikolayevskaya and Khersonskaya oblasts the areas planted in alfalfa and sainfoin are not being increased much this year, and in some places the areas planted in them are even decreasing. For instance, in Novoodesskiy Rayon in Nikolayevskaya Oblast the proportion of perennial grasses has decreased to a minimum -- 3.6 percent of the area planted in feed crops. Many rayons cannot be proud of large yields. And this is because the agricultural agencies and agromical services of certain kolkhozes and sovkhoses treat perennial crops as something secondary. The level of agrotechnology of their cultivation is low and the time periods for planting and tending the planted areas are not met.

Despite the critical shortage of protein in the feeds, 12-15 percent of the feed land in the south of the Ukraine is given to annual grasses. And yet their cultivation, especially on irrigated land, is an intolerable luxury since they contain only two-thirds as much digestible protein as, say, alfalfa. And their productivity is appreciably less.

Recently party and soviet agencies have adopted many decisions which earmark measures for expanding the areas planted in perennial grasses. But what has actually been done is still inadequate. For example, the farms do not have enough planting material and they must send "envoys" for it, even to Central Asia. At the same time, on many sovkhozes and kolkhozes and at oblast experimental agricultural stations the production of seeds is still arranged poorly, and they lack the proper control over the correct raising and harvesting of them. And, after all, the south of the Ukraine should not only supply itself with seeds, but should also supply them to other zones of the republic and the country.

It is known that an important role is assigned to the grain storage fields in strengthening the feed base. And there is a great lack of coordination in the structure of the planted areas here. The experience of advanced workers shows that it is necessary to plant more land in corn. On the Black Sea steppes, especially on irrigated land, it produces up to 100 and more quintals of grain per hectare.

"Last year for the first time we used industrial technology for raising corn," says the first secretary of the Odesskaya Party Obkom, N. Kirichenko. "We planted 5,000 hectares of it. And each one produced 67.5 quintals. Moreover, labor productivity increased more than 3.5-fold."

This experience has inspired hope. This year 60,000 hectares in the oblast will be planted according to the new technology. On the whole, the farms intend to harvest an average of 60 quintals of grain per hectare. The farms have prepared carefully for the harvest. The rayons have created more than 300 mechanized teams and detachments that specialize in raising corn. Personnel have been trained, technical equipment has been prepared, and advanced experience has been studied.

Farmers of the Crimea also have achievements to their credit. Last fall they obtained an average of 66.6 quintals of corn from each irrigated hectare. But in Khersonskaya and Nikolayevskaya oblasts the yield of "amber grain" was only half as much. When explaining this shortage, managers and specialists are quite willing to refer to "specific" weather conditions or to the fact that the corn "reacts" poorly to the application of fertilizers. But the detachment of the Khersonskaya master and winner of the State Prize of the Ukrainian SSR, A. Korchinskiy, of the Sovkhoz imeni 60-letiya Sovetskoy Ukrainy annually obtains 100 and more quintals of corn from each hectare of a large area.

This means that the weather is not to blame for the poor productivity. It is simply that the management and specialists of a number of farms of Khersonskaya and Nikolayevskaya oblasts do not devote enough attention to the dissemination of the practice of advanced workers or to the training of machine operators. Teams and detachments are frequently not assigned to fields planted in corn. They simply "forget" to create them. The possibilities of increasing the yields are not exhausted in Odesskaya or Krynokaya

oblasts either. There are still many rayons, kolkhoses and sovkholes which stand in the shadow of the advanced workers and receive yields that are considerably less than those of their neighbors.

It is possible to make up for the shortage of protein components in feeds by increasing the production of soy beans. Their nutritive value in terms of a number of components is several times greater than that of corn or wheat. This has been observed, for example, on the Odesskaya Progress Kolhoz where the chairman is Hero of Socialist Labor, N. Myndru. And they have begun to produce soy beans. Last year they obtained more than 35 quintals of soy beans from each of 170 hectares. Now the area planted in them is being expanded considerably.

There is also another example of positive experience. In Krasnogvardeyskiy Rayon they are gathering 26.9 quintals of soy beans from each hectare, and in Krymakiya Oblast as a whole -- 18.6 quintals. This year they intend to increase the areas planted in soy beans more than two-fold. The results are good and it is necessary to reinforce them.

But in other oblasts not enough attention is being devoted to soy beans. In Khersonskaya Oblast, for example, last year they harvested only 8 quintals of beans from each hectare. They talk a lot about producing this crop and they make decisions but they do not do very much in practice. And this year no teams have been assigned to the areas that have been allotted this crop. True, the farmers engaged in the production of soy beans encounter great difficulties. The shortage of herbicides, especially treflan, impedes the introduction of industrial technology for cultivation.

"It is necessary to work on synthesizing complex action herbicides which would destroy all 'enemies' of soy beans," says the chief of the laboratory for the agrotechnology of feeds crops of the All-Union Scientific Research Institute of Corn in Dnepropetrovsk, A. Babich.

The production technology is also imperfect. So far, no special complex of machines is being produced. It is necessary to plant and cultivate the areas and to harvest the soy beans with machines that are not intended for these purposes. So far, technical equipment is being "borrowed" from corn and vegetable growers. In order to increase labor productivity and avoid losses of the crop, it is necessary to have special seeders and combines. Selection workers are also behind in their duties: There are not enough regionalized strains of soy beans. Moreover, they all ripen late. And it is necessary to have a "selection" of three or four strains, especially early ripening ones. Then the irrigated fields of the south of the Ukraine will produce two or three crops a year.

There is yet another extremely efficient crop. I am speaking about sorghum. On the leading farms they harvest 100 quintals of it per hectare. It produces excellent feed. But here is the problem -- the area planted in this crop is not only not increasing, but is decreasing. In the Crimea for

example, which is supposed to be the supplier of sorghum seeds for other oblasts, in the past 4 years the areas have been reduced from 4,700 hectares to 1,900.

There are many other reserves for feed production in the south of the Ukraine. In the first place, one can expand repeated plantings and minor irrigation. The possibilities of repeated plantings should be taken advantage of more actively. But on the majority of kolkhozes and sovkhozes of the region this is not done. There are many reasons for this. The times for harvesting the preceding crops are postponed and there is a shortage of personnel during the harvest period. Some farms need feed harvesting equipment, especially mowers and silage harvesting combines.

At the July (1978) Plenum of the CPSU Central Committee they set the task of creating a special branch for feed production. Party and soviet agencies of the southern oblasts of the Ukraine have done much to carry this out. Many farms have created brigades, mechanized detachments and teams for producing and procuring forage. A couple of days ago in Odesskaya Oblast they formed an oblast staff which was to take over control of this important branch of agriculture. But they do not approach the resolution of the problem of feed production with the proper attention and responsibility everywhere.

"On a number of farms the feed fields are still not being assigned to individual workers," notes the chief of the Nikolayevskaya Oblast Agricultural Administration, I. Yastreba. "There is one reason for this: Many specialists of rayon agricultural administrations and managers of kolkhozes and sovkhozes underestimate the branch. Hence the low level of agrotechnology, the failure to meet deadlines for various jobs, the poor care of the planted areas, and the lack of control over the quality of the feeds. In certain rayons the level of management of the young branch does not meet modern requirements. In order to introduce progressive technology more actively and to improve the quality of the forage, it is necessary to have intelligent, highly skilled specialists. But there are not enough of them. Sometimes the branch is headed by people who do not know the fine points of raising large yields of feed crops, procuring them and storing them."

The Ministry of Agriculture of the Ukraine has created a special administration whose function is to solve the problem of feed production scientifically, taking the future into account. But it has not become a militant center for the introduction of everything that is new and advanced. And local party, soviet and agricultural agencies do not always display initiative and persistence in the work of creating a stable feed base. They are sometimes hesitant about developing the fields with highly productive crops. And there are immense possibilities of doing this.

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WAYS TO INCREASE PROFITABILITY IN FEED PRODUCTION

Moscow SEL'SKOYE KHOZYAYSTVO ROSSII in Russian No 4, Apr 80 pp 19-20

[Article by G. Kulik, director of the Main Planning-Economic Administration of the RSFSR MSKh (Ministry of Agriculture): "Ways to Increase the Profitability of Feed Production"]

[Text] The accelerated development of the animal husbandry branch depends mainly on the feed base. This is understandable since the high-quality and balanced ration secures a high productivity of livestock and consequently, a profitability in production. Nevertheless, many kolkhozes and sovkhozes in the republic still do not fully utilize the reserves for strengthening and expanding the feed base. On the average for 4 years of the current five-year plan the production of coarse and succulent feeds calculated on the basis of feed units increased by only 8 percent in Smolenskaya and Kurskaya oblasts, by 6 in Ryazanskaya, by 3 in Orlovskaya, by 2 in Buryatskaya ASSR and by 1 percent in Tambovskaya Oblast. Moreover, in Kalininskaya Oblast for example many enterprises curtailed the production of coarse and succulent feeds while planning to depend on state resources. This results in a decrease in productivity and in the output of offspring, in a rise in the cost of production and in a drop in profitability.

There was a particularly sharp drop in the production of hay, which is a very nutritious feed. Whereas during the Ninth Five-Year Plan an average of 27.5 million tons were procured annually in the republic, in the current year the figure was only 25 million. The tendency to decrease hay procurement is quite evident in the enterprises of Bryanskaya, Gor'kovskaya, Belgorodskaya and Ul'yanovskaya oblasts and Krasnoyarskiy and Altayskiy krais. This has affected the nutritional value of rations and many kolkhozes and sovkhozes have unjustifiably increased the consumption of concentrated feeds in order to correct the situation. For example, in the enterprises of Vladimirenskaya Oblast and the Mariyskaya ASSR 39 percent of the rations of the herd that is being fattened are concentrates; in Kostromskaya--35; in Tul'skaya--31; in Tambovskaya--33; in Penzenskaya--34; and in Sverdlovskaya--38 percent.

Among the other reasons that meat production is slowed the protein imbalance of feed is not among the last. Of the required 105-110 grams of protein per

feed unit, no more than 94-97 are procured. The primary reason for such a situation is the drop in the production of pulse crops. On the average for 4 years of the five-year plan 700,000 tons fewer were produced in the republic than on the average for 1966-1970. Many kolkhozes and sovkhoses of the Tsentral'nyy, Volgo-Vyatskiy and Tsentral'no-Chernozemnyy rayons decreased the production of pulse crops by more than half.

In order to replenish the protein balance, enterprises plan to increase the production of sunflowers and soybeans this year, to procure no fewer than 4.2 million tons of grass meal, to increase the gross yield of pulse crops to 7.1 million tons, and to use no fewer than 1,500,000 tons of carbamide and urea during silaging. Resources for increasing protein raw materials do exist and it is most important that each enterprise make maximal use of them.

The slow growth of feed production, the poor feed supplies for the livestock herd and the unjustifiable changes in the ration structure result in the overconsumption of the product. Thus, whereas in 1970 in the republic the production of 1 quintal of milk required 1.33 quintals of feed units and a quintal of weight gain in livestock required 10.8 feed units, in 1978 1.48 and 12.3 were needed respectively. The kolkhozes and sovkhoses of Belgorodskaya, Tambovskaya, Volgogradskaya, Saratovskaya and Chitinskaya oblasts and Stavropol'skiy Kray expend over 1.6 quintals of feed units per quintal of milk. Over 13 quintals of feed units are consumed to produce 1 quintal of weight gain in cattle in the enterprises of Mordovskaya ASSR, Kurakaya, Tambovskaya and Saratovskaya oblasts and Primorskiy and Khabarovskiy krais. All of this has a negative effect on the final results. Thus, the cost of 1 quintal of feed units utilized as feed for livestock last year comprised over 10 rubles. This means that the over-expenditure of feed as compared to established norms of only 1-1.5 quintals of feed units will significantly increase the cost of livestock products.

The expenditure of feed in excess of the standard is greatly determined by its quality. In recent years as a result of the introduction of a progressive procurement technology this indicator has improved somewhat for silage and hay. However, cases of mismanagement are still quite frequent. A survey indicated that many enterprises in Gor'kovskaya, Permskaya, Kirovskaya, Belgorodskaya and Tyumenskaya oblasts put haylage into storage while tolerating gross violations in the storage technology. In particular, the moisture content of this nutritive feed surpassed the norm by 25-30 percent last year.

Kolkhozes and sovkhoses have a powerful material-technical base at their disposal for the production of feed using artificial drying methods. Many of them are utilizing this technology skilfully. For example, in Leningrad, Omskaya, Sverdlovskaya, Amurskaya, Kamchatskaya and Sakhalinskaya oblasts and Primorskiy Kray each unit last year procured over 300 tons of grass meal. At the same time in Kalininskaya, Kaluzhskaya, Orlovskaya, Belgorodskaya and Tyumenskaya oblasts and the

Dagestanakaya and Kabardino-Balkarskaya autonomous republics this indicator did not surpass 100 tons. Such results had varying effects on the productivity of livestock.

In order to raise the productivity of livestock farming it is necessary not only to decrease the expenditure of feed for the production of one production unit as well the cost of feed. The importance of this is evident. After all, over half of all production costs in the branch are for feed. Nevertheless, the cost of feed in many enterprises continues to increase instead of dropping. On the average for 4 years of the five-year plan in the republic the productivity of perennial grasses for hay purposes increased by only 8 percent in comparison with the levels of 1971-1975 and comprised 18.3 quintals per hectare. Even less, 10-13 quintals, is produced by the enterprises of Ural'skiy, Zapadno-Sibirskiy and Vostochno-Sibirskiy rayons.

The existing situation can be corrected by raising productivity, by increasing the output of feed units per hectare, by improving the structure of feed fields and by strengthening the material-technical base of feed production with its transition to industrial technology. Specifically by means of this the enterprises of the Moscow region, for example, were able to raise the productivity of perennial grasses to 44 quintals per hectare, expressed in terms of hay.

There are great possibilities for increasing feed production through a better use of feed lands. At the present time their productivity is 7.5-8 quintals of hay per hectare on the average in the republic. Such indicators can be explained to a large degree by the poor quality of work in radical and surface amelioration of feed lands. Last year the plan for such operations was fulfilled by only 42 percent; that for creating meadows--by 45 percent. And in enterprises of oblasts such as Orlovskaya, Permskaya, Novgorodskaya, Irkutskaya only 10 percent of the planned volume of land was assimilated.

We cannot forget the resources found in a more complete utilization of the possibilities of irrigated haylands and pastures. Nevertheless, until now the productivity of these lands has remained low. The productivity of 1 hectare of irrigated haylands does not exceed 11-12 quintals of feed units per hectare. Here is another example, in the Tatarskaya ASSR about 70 quintals of feed units are produced on cultivated pastures, whereas in Chitinskaya and Astrakhanskaya oblasts the corresponding figures are 15 and 18. On the average in the republic this indicator comprises 30 quintals.

As before, the production of grass seed is a problem. The procurement volume during the last 5 years has remained at 1971-1975 levels, and for leguminous crops it has even dropped. As a result there is an undersowing of about 1.5 million hectares of perennial grasses in field and crop rotations, resulting in the underproduction of large quantities of feed and protein.

A few words should be said about interenterprise mixed-fodder enterprises and shops. While having the capacity to produce over 12 million tons of mixed fodder and feed mixtures annually, they actual. produce no more than six. The reserves are apparent. In order to accelerate their realization directors must give the most serious attention to the interfarm enterprises on feed production that have been created recently, especially those found on irrigated and bottom land. An improvement in the activities of existing associations and the organization of new ones will enable workers to concentrate their efforts in the necessary direction which will undoubtedly affect the growth of productivity and the decrease in the cost of feed. This is even more important this year because the kolkhozes and sovkhoses of the republic must produce 120 million tons of coarse and 170 million tons of succulent feeds. The procurement of hay will increase by 70, of haylage--by 17, and of silage--by 40 percent; that of root crops--by 2.3 times. One of the main goals of village workers is the fulfillment of these plans. Moreover, the state is allocating 937 million rubles for strengthening the material-technical base of feed production, surpassing last year's capital investments by over 200 million rubles.

The complex program of feed production that was developed for each autonomous republic, kray, oblast, rayon and enterprise will be very helpful. It includes specific measures directed at improving the structure of feed lands, at raising the productivity of agricultural crops and natural haylands, at improving the quality of feeds and at increasing the production of high-protein crops. The economic service of kolkhozes, sovkhoses and other agricultural organs must be concerned about backing planned measures in production-financial plans with the necessary technology and material resources. This will become the foundation for the continued growth of profitability in all branches of animal husbandry and for the increased production of meat, milk and other products.

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LIVESTOCK FEED PROCUREMENT

AGROTECHNOLOGY OF LEGUMINOUS CROPS

Moscow SEL'SKAYA ZHIZN' in Russian 27 Apr 80 p 2

[Article by N. Chekalin, director of the All-Union Scientific Research Institute of Leguminous and Grain Crops; V. Letunovskiy, laboratory head; and A. Isayev, senior scientist at the institute, Orlovskaya Oblast: "Agrotechnology of Leguminous Crops--Putting Feed Protein Reserves in Action!"]

[Text] It is known that leguminous [pulse] crops are among the main sources of protein for livestock farmers. There is twice as much protein in them as in ordinary fodder grain. In view of this, it is imperative to make the utmost effort in the spring to expand planting of leguminous crops and to create a reliable base for the production of first rate feed.

The largest harvests of leguminous crops are obtained in the Ukraine, central chernozem regions, Povolzh'ye and northern Caucasus. There are quite a few regions there where more than 30 centners of peas, as well as white lupine [*Lupinus albus* L.] seeds, are gathered per hectare. The conditions for raising leguminous crops are less favorable in the Nonchernozem Zone of RSFSR; however, large harvests of valuable products are obtained there in many farms from year to year. Thus, at the sovkhos imeni Tsvetkov, Maloyaroslavetskiy Rayon, Kaluzhskaya Oblast, the pea harvest constituted 27-30 centners in the current five-year period.

These examples demonstrate graphically that one can achieve a high yield from leguminous crop fields provided technology is adhered to, and supply the livestock industry with balanced diets, with regard to protein content. But, unfortunately, this is not yet a goal that is pursued everywhere. Valuable crops are often planted on unfertilized, weed-infested fields, and the schedule for planting and gathering is not followed. Effective enough steps are not being taken to control weeds, diseases and pests.

Such an attitude toward leguminous crops must be radically changed, this very year, when realistic possibilities are being provided for broadening the range of their cultivation. We refer primarily to peas, white lupine, feed beans, vetchling [*Lathyrus*] and chick peas. Thus far,

they are planted over insignificant areas, although the productivity of many of them is quite high.

The white lupine cultivars developed in the last few years, with a grain yield under industrial conditions of 30-45 centners/ha, can be successfully raised in the Central Chernozem Region, southwestern Ukraine, southern part of Poles'ye and irrigated land of Kazakhstan, Povolzh'ye and other regions. Feed beans are notable for their productivity on the fertile soil of the Nonchernozem zone of RSFSR, Baltic region, western Ukraine and Belorussia. Moreover, in these regions, there is no equal to them in protein yield: 9 centners per ha. It is imperative to restore fields of chick peas and vetchling in the areas where they were traditionally raised, as well as such valuable food crops as lentils, in Povolzh'ye, Central Chernozem Zone, Ukraine, and kidney beans in Moldavia and the Ukraine.

Breeders have developed some new, highly productive cultivars of leguminous plants, which have a number of valuable economic indicators. We refer to "neosypayushchiyaya-1" [nonshedding], "zelenozernyy-1" [green-grain], "topaz" and "ukosnyy-9" [mowing] peas; "kormovaya-50" [fodder] and "nadezhda" [hope] maple peas; "Orlovskaya-37" and "Omskaya-8" early ripening spring vetch [Vicia]; "solnechnyy" [sunny] and "gorizont" [horizon] white lupine. It is imperative to take steps to expedite reproduction and introduction of these cultivars to production.

In view of the capacity of leguminous crops to make good use of the after-effects of applying fertilizers, it is best to plant them on intensively fertilized weed-free fields of precursors (potatoes, corn, sugar beets, winter crops). It is also important to make the utmost use of the biological capacity of these crops to fix atmospheric nitrogen, for which purpose it is imperative to provide phosphorus and potassium nutrition. From 20 to 90 kg phosphorus and potassium per hectare are used, depending on the level of planned harvest and soil fertility. The greatest economic effect is obtained when phosphorus fertilizers are spread in the rows at sowing time.

The use of molybdenum fertilizers is also effective, particularly on acid soil. When seeds are treated with molybdenum on soddy podzolic and podzolic soil, an additional 1.2-2.4 centners of grain per hectare are obtained, and an additional 3.6 centners in areas with gray forest soil in central and other regions of our country. In a number of cases, particularly lupine, it is important to use preparations of rhizobium bacteria. It is mandatory to use nitragin in new areas and when there are long interruptions in raising some crop or other.

The opinion that a delay in spring field work would lead to a reduction in harvest of leguminous crops, in particular peas, is not quite correct. There have been analogous conditions many times before. Thus, according

to the data of the Povolzh'ye station of the All-Union Scientific Research Institute of Corn, the optimum time for planting peas in Volgogradskaya Oblast was 30 April in 1963, 2 May in 1964 and 19 April in 1965. The harvest constituted 26.2, 20.4 and 18.3 centners/ha, respectively. At the same time, these indices cannot be equated with delay in planting in general, since the harvest diminishes drastically when it is done at a later time. According to the data of State strain-testing centers, a 7-15-day delay in planting, as compared to the optimum time, diminishes the grain harvest, for example, in the Nonchernozem Zone of RSFSR and Belorussia, to 3.2 centners/ha.

Consequently, peas must be planted as rapidly as possible. The seeds are put in the soil at the first opportunity, when it is possible to go out in the fields, within 2-3 days. The same applies to spring vetch. In view of the shortage of sowing material for these crops, the sowing norm can be reduced by 10-15%, which will not have an appreciable influence on the productivity. However, more attention should then be given to chemical methods of protecting the crops against weeds.

When there is rapid temperature rise, it is important to pay attention that the pea seeds are put in the soil at the maximum recommended depth. When the weather is hot and dry, postplanting rolling down of peas and other leguminous crops acquires special importance. This simple procedure provides for retention of moisture in the soil and timely appearance of sprouts.

Weeds can be very detrimental. Tractors with harrows are driven to the fields to destroy most of them. The first trip is made 3-4 days after sowing, but no later than 2-3 days before appearance of seedlings; they go out a second time after sprouting, at the stage of 2-5 leaves. As a rule, harrowing after sprouting is performed in the afternoon, and the equipment should move no faster than 4-5 km/h.

Harrowing and the use of herbicides, such as prometrin and linuron, provide for more reliable protection against weeds. These products are used before the crops sprout. Tropotox (2M-4KhM) is used at the stage of 3-6 leaves on pea crops as protection against dicotyledonous weeds.

Special attention must be given to organization of pest control. When there is mass scale invasion by bean and pea weevils [*Sitona lineatus*] (over 40 specimens per square meter), polychloropinene and metafos are used; metafos or chlorofos are used against pea moths; the seeds are fumigated against "brukhus" [?], and during the period of mass scale swarming of beetles, the crops are treated with chlorofos or metafos.

10,657
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LIVESTOCK

LABOR ORGANIZATION IN ANIMAL HUSBANDRY IN ORENBURGSKAYA OBLAST

Moscow TRUD in Russian 5 Dec 79 p 2

[Article by P. Inyakin, head of the division of economics of the Orenburg Scientific Research Institute of Agriculture, candidate of economic sciences, Orenburg: "Advantages of Labor Cooperation"]

[Text] Meat production on interfarm fattening areas has been widely developed on farms in Orenburgskaya Oblast. A total of 287 kolkhozes and 89 sovkhoses now participate in cooperative livestock fattening. A total of 35 interfarm areas--almost in every rayon--have been built with their funds. They give two-thirds of the total volume of meat produced in the oblast. About 70 percent of the delivered livestock is of a high grade.

As compared with ordinary departments all the indicators on fattening areas are much better. The average daily weight gains are 2.1-fold higher and fodder expenditures on kolkhozes are 19 percent lower and on sovkhoses, 35 percent. Labor expenditures per quintal of weight gain have been lowered to less than one-sixth as a result of the high degree of mechanization of labor processes and a more efficient farm specialization.

The advantages of meat production on fattening areas are obvious. However, not everything goes smoothly there. In a number of the oblast's rayons the advantages of interfarm fattening areas are not utilized fully. Whereas high weight gains are attained in Asekeyevskiy, Tashlinskiy, Ilek-skiy, Orenburgskiy and some other rayons, they amount to 400 or 500 grams in Tyul'ganskiy, Matveyevskiy, Sharlykskiy, Ponomarevskiy and Sorochinskiy rayons.

The low standard of labor and lack of organization and slowness in the solution of urgent problems--such as the establishment of a firm fodder base, relationships among the participants in cooperation and improvement in labor organization--hamper an efficient utilization of the capabilities of interfarm cooperation in animal husbandry.

Strengthening the fodder base is the most important task. Many fattening areas do not always receive high-quality fodder in a full volume from supplier farms. Practice shows that the farm on whose territory a fattening area is located should itself produce all the fodder for the herd.

Among other farms in the oblast the Kolkhoz imeni V. Kuybyshev in Asekeyevskiy Rayon changed over to its own production of all types of fodder for the fattening area. Grass, silage crops and grain fodder are grown there on large areas. Nutritive mixtures are prepared in the fodder shop in accordance with scientific rations.

The problem of providing fattening areas with young stock meeting high weight requirements is no less important. The terms of delivery of young stock for fattening--periods, age, weight and so forth--are specified in contracts with farms. Firm prices of livestock delivered for fattening have been fixed. It would seem that suppliers are interested in fulfilling all contractual obligations. Nevertheless, in Orenburgskaya Oblast in the last few years the average weight of young stock received in fattening areas has been lowered, which means that the length of fattening has increased.

The optimal forms of labor organization on fattening areas have not yet been established everywhere. The brigade remains the basic production unit on most of them. During the initial period, when the areas were small, that is, for 1,600 places, and eight to ten workers serviced them, the brigade method was the best. Now the areas hold up to 6,000 head. There is more equipment and more farm structures, the number of workers has increased, the nature of their labor has changed and the requirements on their skills have risen. Now a brigade has 20 to 25 people--fitters, electricians, repairmen and machine operators. A brigade leader simply does not have enough time to keep an eye on the farm.

The experience of advanced fattening areas in Asekeyevskiy, Buzulukskiy, Ilekskiy, Adamovskiy and other rayons convinces us of the advantages of the brigade and link form of labor organization. As a rule, links are established inside brigades and groups of livestock for the entire fattening cycle are assigned to workers, which interests livestock breeders in the final results of work.

Owing to an efficient technological and functional division of labor, productivity has increased considerably in links. One worker in a link accounts for 250 to 300 head--twice as many as before. Earnings are also higher. This contributes to the stability of personnel and to an improvement in their skills.

The brigade and link labor organization makes it possible to best join equipment and people in one production process, ensures the most efficient utilization of material and labor resources and contributes to an increase in the production of meat and to a reduction in its costs. In brief, experience is available and it is up to economic and trade organizations to see to it that it is disseminated.

Many other problems of interfarm cooperation in meat production have not been fully solved. For example, there are no satisfactory standard plans for areas of various holding capacities.

Meat production on interfarm fattening areas has demonstrated its advantage in all respects. It is very important to study and disseminate without fail the experience of advanced collectives, to continue to improve fattening techniques and labor organization and to increase the mutual interest of all the participants in cooperation in the economic results of breeding and fattening livestock under conditions maximally close to industrial conditions. All these measures will make it possible to fulfill the task set by the November (1979) Plenum of the CPSU Central Committee--to increase meat production significantly.

11,439
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REGIONAL DEVELOPMENT

FACTORS CITED FOR INCREASED KIRGIZ AGRICULTURAL PRODUCTION

Frunse SEL'SKOYE KHOZYAYSTVO KIRGIZII in Russian No 3, Mar 80 pp 2-3

[Article: "Greater Field and Farm Production for the Homeland"]

[Text] With each day, the breath of spring is more noticeable. Agricultural workers are currently preoccupied with the new harvest and the successful completion of the over-wintering of livestock. They have experienced an enormous upsurge of creative energy and political and job enthusiasm inspired by the address of Comrade L. I. Brezhnev to the November (1979) Plenum of the CPSU Central Committee, in which the constructive efforts of the party and of the entire Soviet nation during the current five-year plan were examined in exceptional depth; complex problems in the nation's social-economic development for the final year of the 10th Five-Year Plan were pinpointed, shortcomings and problem areas were uncovered, and specific means for their elimination were pointed out. In response to the patriotic concern of the party for the national welfare, kolkhozes and sovkhozes have established a socialist competition to increase the output of agricultural products, achieve better end results, and to transform the final year of the five-year plan into a year of urgent Leninist work.

As a consequence of their implementation of the resolutions of the 25th party congress, July (1978) Plenum of the CPSU Central Committee, farmers of the republic are increasing the volume of agricultural production. For the first 4 years of the current five-year plan, gross production output totaled 5.725 billion rubles, which is 534 million rubles more than for the corresponding period of the Ninth Five-Year Plan. The average annual gross grain yield approached 1.385 million tons, which is 290,000 tons greater than the average for the previous five-year plan. A record grain yield, exceeding 1.5 million tons, will also be realized for 1979, which saw 26.4 quintals obtained from each hectare and 302,600 tons of grain, or 12,600 tons more than called for by the plan, poured into the nation's storage bins. Enjoying much success in the fulfillment of their commitment were grain growers of Tyupskiy, Sokulukskiy, Moskovskiy, Kalininskiy, Leninpol'skiy, Kochkorskiy, and Chuyskiy rayons.

Vegetable growers produced excellent results, selling more than 274,000 tons of vegetables to the state, which comprises 125 percent of the procurements under the plan. In comparison with 1978, the production and storage of vine, gourd, and essential oil-bearing crops increased markedly. The cotton growers displayed tremendous heroism. Having overcome the unprecedented caprices of nature, they raised and harvested 208,000 tons of valuable raw material, thus fulfilling the state plan.

For their part, farm workers are achieving increases in livestock productivity. Compared to 1978, livestock herds on kolkhozes and sovkhozes have grown and livestock productivity has increased noticeably, which has provided for fulfillment of the plan as regards the sale of milk, eggs and wool. All of this is the result of the constructive efforts of kolkhoz and sovkhoz personnel, the entire agricultural labor force, the massive organizational and ideological support work of party organizations, the directors of agricultural agencies, kolkhozes and sovkhozes, and agricultural specialists.

While favorably evaluating these achievements, it is impossible to ignore the serious shortcomings in the output of agricultural production. Many kolkhozes and sovkhozes are not utilizing existing resources to the fullest extent, in consequence of which, low yields of grain and feed crops, raw cotton, potatoes, fruits, and berries are obtained. Farms are experiencing a drop in milk yields and weight gains. The shortfall in the production of meat and sugar beets is cause for serious concern. While production shortfall in a number of sectors is adversely affecting the development of agriculture as a whole, not to mention the entire economy of the republic. Of course, objective difficulties cannot be excluded from causative consideration. But neither can everything be attributed to them. In fact, under the very same conditions, the foremost collectives obtain high yields at harvest, high livestock weight gains, and high milk yields. The upshot of this being that the lagging of some kolkhozes and sovkhozes in the output of agricultural products is the result of a low level of economic management, poor utilization of material-technical equipment and labor resources, and weak accountability of the cadres for assigned work.

Take meat production as an example. The extended winter and natural disasters of the past year no doubt have testified to the state of affairs in this area. Measures adopted with the help of the party and the government have made it possible to avert huge losses, but a great many unresolved problems still remain in the production and storage of meat. Many farms, particularly in Narynskaya Oblast, Talasskiy and Kalininskiy rayons, continue to market cattle which are substandard and below average fatness levels. Great concern for the fulfillment of meat quotas of the five-year plan has arisen in a number of other rayons in the republic.

The primary cause of this situation is the extremely unsatisfactory usage of existing resources. Proper attention has not been given to problems in a number of rayons regarding the intensification of livestock production. Due solely to the marketing of substandard cattle, last year farms of Oshskaya Oblast fell short of expectations by about 4,000 tons of meat, while no less an amount was lost by kolkhozes and sovkhozes of Issyk-Kul'skaya Oblast, Talasskiy, Kirovskiy and Panfilovskiy rayons. Can such losses be avoided? Unarguably, they can, and must. Last year, at mass marketing, meat cattle moved from pastures and feed lots to meat-packing combines at an average live-weight of 335-350 kg; for sheep, 44-46 kg.

Another major reserve is reduction of the incidence of epizootic disease and the nonproductive consumption of livestock. In this respect, last year, for the republic as a whole, the situation was somewhat improved. However, on farms of Issyk-Kul'skaya and Oshskaya oblasti, Sokulukskiy, Moskovskiy, Talasskiy, Chuykiy and Panfilovskiy rayons, the incidence of epizootic disease among livestock not only did not decline, but, conversely, rose. Even more unjustifiably extensive was the slaughter of cattle for internal farm usage. In a number of rayons, it significantly exceeds established limitations. It is essential that these deficiencies be eliminated and that there be more efficient utilization of existing reserves, the most important of which is the proper implementation of efforts with respect to reproduction of the herd and increasing the relative importance of brood dams.

At the November (1979) Plenum of the CPSU Central Committee, much attention was focused on the problem of supplying the populace with food-stuffs, especially meat. In a report to the 18th Plenum of the Central Committee of the Kirgiz Communist Party, Comrade T. U. Usubaliyev declared, "In solving this problem, we will necessarily give a boost to agricultural development." According to plan, gross agricultural production for 1980 will increase by 4.1 percent over the previous year. Field and farm workers set the following figures for sales to the state: 304,000 tons of grain; 1.5 million sugar beets; 210,000 tons of raw cotton; 34,000 tons of leaf tobacco; 80,000 tons of potatoes; 250,000 tons of vegetables; 45,000 tons of gourd crops; 100,000 tons of fruits and berries; 46,000 tons of grapes; 1,000 tons of silk; 234,000 tons of cattle and poultry by live weight; 432,000 tons of milk; 41,000 tons (by recorded weight) of wool; 263 million eggs.

A primary factor in the solution of the problem of supplying the population with meat is the further enhancement of cooperation, as well as the expansion of existing--and construction of new--interfarm complexes and associations devoted to the production of meat. The following figures serve as evidence of their high level of efficiency: 22 rapidly developed interfarm enterprises of "Kirgizshivprom" [Kirgiz livestock production association], which comprise 5.5 percent of all farms producing meat, realized 37 percent of the weight gain for meat cattle. Such rapidly

expanding fields as poultry production, hog production, and rabbit production are significantly increasing meat resources. A great deal of work remains to be done in the area of increasing production of milk and wool, as well as improving their quality.

The most difficult time for livestock producers has approached--the final stage of livestock wintering-over. This time demands of them a complete concentration of effort, and a mobilization of all resources in order to prevent a reduction in livestock productivity, and to lay down a sound basis for the further development of production. Realizing this, the majority of the collectives work with extreme efficiency, striving to successfully carry out the objectives of the five-year plan.

A new surge in labor has been inspired by the resolution of the CPSU Central Committee, the USSR Council of Ministers, VTsSPS [All-Union Central Council of Trade Unions], and the VLSM [All-Union Leninist Young Communist League] Central Committee regarding the development of an All-Union socialist competition among livestock raisers aimed at increasing production output and processing during the livestock over-wintering period. Highly worthwhile initiative was displayed by workers of Alamedinskiy Rayon. Thanks both to the feeding to livestock of combination feeds and feed mixtures with added trace nutrients, and to an improvement as well in the quality of preventive medicine efforts they were successful in maintaining up to 1 July 99.6 percent of large-horned cattle, 99.5 percent of horses, 99.3 percent of hogs, and 97 percent of sheep for the rayon as a whole. Projections have been made for the expansion of livestock fattening, increasing milk yields of new heifers, raising the average annual weight gain for young large-horned cattle to 600 g and marketing weight to 400 kg, raising milk yield to 2,675 kg and wool shearing to 3.6 kg, and bringing the egg productivity of hens up to 165 eggs. This will permit farms of the rayon to deliver to the state 3,300 tons of livestock and poultry and 21,700 tons of milk, of which 80 percent will be prime grade, in addition to 33 million eggs.

Heavy commitments to stall-maintenance and semistall-pasture maintenance periods have been made by livestock producers of the kolkhozes, "Krasnaya Zarya" of Leninpol'skiy Rayon, imeni Karl Marx of Tonetskiy Rayon, imeni 30-year USSR of Tyupskiy Rayon, "Sorok Let Oktyabrya" of Issyk-Atinskiy Rayon, and others. In their high-level planning, they are being guided by the accomplishments of advanced farming operations which have successfully mastered progressive techniques of livestock fattening and maintenance.

On the farms of these enterprises, regular mutual accounting takes place of the progress being made in the fulfillment of commitments; points in the competition are totaled up weekly and the winners are given recognition and encouragement. At the same time, on a number of farms in Ak-Suyevskiy, Keminskiy, Dzhungal'skiy, and Tyan'-Shan'skiy rayons, the party organizations, directors of agricultural agencies, kolkhozes and

sovkhozes, and resident specialists are not backing up their commitments with daily political-educational and organizational efforts: they are failing to focus public opinion on those who do not value the aforementioned official statement. Is this not the reason that the sovkhozes "Chon-Alay," "Kyzyl-Suu," and "Kashka-Suu" of Alayskiy Rayon, and "Turgon'," "Issyk-Kul'," and imeni Dzerzhinskiy of Ak-Suyakiy Rayon have so many livestock raisers whose production indicators are lower than the overall farm average.

The crucial factor in increasing livestock production is a reliable feed base. This problem must be resolved on several levels. In addition there must be: further expansion of the acreage sown to feed crops; increases in crop yields at harvest and in the quality of feeds being stored up; improvement in feed processing. The need for providing complexes with feeds is causing serious concern. The existing nine special feed farms and the complexes themselves satisfy these requirements by a factor of somewhat less than 40 percent. It is therefore essential right now that every rayon allocate to "Kirgizzhivprom" enough land for the complexes to fully supply their own needs, if only with respect to coarse and succulent feeds. Particular attention should be given to the improvement of standing grass crops on pasture lands.

Farm workers are faced with enormous tasks in the area of increasing the level of agricultural production. At the November (1979) Plenum of the CPSU Central Committee, Comrade L. I. Brezhnev pointed out that, "even though immediate feed requirements in grain have for quite some time been fully satisfied, we are continuing to increase grain production--an increase with feeds in mind." This is especially important for our republic, where livestock production is the primary agricultural concern. Whereas last year, the kolkhozes and sovkhozes obtained 37.6 quintals of cereals and 51.7 quintals of corn from each hectare of irrigated land, this year, they will have to strive for 40 and 60 quintals per hectare respectively. This is a completely realistic objective if one considers that yields at harvest on many farms are significantly higher than the average for the republic as a whole. We cannot afford to limit the amount of attention paid to commercial crops, vegetables, gourds, potatoes, and grapes.

All prerequisites presently exist for a sharp increase in yields at harvest for all agricultural crops. Throughout the republic, expansion has taken place in the amount of land sown to winter crops, considerable acreage has been turned to fall plowing, and the area of land under irrigation has been greatly increased. Now everything depends on the ability of farm directors and specialists, agricultural agencies, party organizations, and all farm workers to determine the most effective framework for the sowing of crops, to bring every kilogram of seed up to standard level, to build up the maximum amount of moisture in the soil, to efficiently utilize organic and mineral fertilizers, and to perform timely and effective maintenance of farm equipment. And this

obligation is not limited to farm workers alone. Helping us greet the spring fully equipped is the duty of workers in enterprises of Goskomsel'khoztekhnika, soil modification experts, construction organizations, food storage workers, in fact, everyone who takes part in the production of grains, meat, milk, vegetables, and other products.

Farm workers of the republic are called upon to do everything in their power during the final year of the five-year plan, which must become for each of us a year of forceful Leninist effort, to sharply increase yields at harvest for all agricultural crops, as well as livestock productivity, and to provide our homeland with the greatest possible amount of high-quality products.

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REGIONAL DEVELOPMENT

DEVELOPMENT OF STABLE AGRICULTURAL AND FOOD BASE FOR SIBERIA

Moscow SOVETSKAYA ROSSIYA in Russian 4, 7 May 80

[Serialized article by B. Lazarev, L. L'vov, and B. Prokhorov: "An Agrarian Base for Siberia"]

[4 May 80, pp 1-2]

[Text] What attracts general attention to Siberia? No, not only the beauty of nature and the stark exoticism. Primarily, it is the scope of the transformation of this immense, rich area. The population is increasing rapidly. All this requires intensive development of Siberia's agrarian base.

How are problems of a unified food complex being solved here? This question began many of our conversations with party and Soviet workers, executives, specialists and scientists of Omskaya and Novosibirskaya oblasts and Altayskiy Kray.

Here is what we heard:

A. Filatov -- first secretary of the Novosibirskaya Party Obkom: It is a large problem. It is necessary to strengthen all parts of the food complex and we are working in this direction. But we must more purposively solve problems of material and technical support for Siberian agriculture. Without investing money one does not obtain large crops.

I. Ovsyannikov -- chief of the Altayskiy Kray agricultural administration: You are probably familiar with the materials of the recent plenum of the party kray committee. Our shortcomings were discussed in them. But still it is necessary to understand something else: we have had a drought for practically 7 years in a row. During some years even the straw for the livestock had to be shipped in from other oblasts.

N. Krasnoshchekov -- deputy chairman of the Siberian Branch of VASKhNIL: Our institutes are conducting research into various directions of the development of the region's agriculture. Many developments and recommendations have been prepared. But they are all related mainly to production.

So far, there are no generalizations about other parts of a unified food complex for Siberia.

Opinions on the problem can vary, of course, but in any case one thing is important here: who sees the potentials of the oblast, kray and the entire region and how; who evaluates the level that has already been achieved in the development of agriculture, and how? The degree to which the plans are realistic and the purposeful action of the collective in the search for and the utilization of reserves depend largely on this.

The ability to see the future and to make the correct calculations is being manifested fairly clearly by many party, soviet and management leaders of Altayskiy Kray and Novosibirskaya and other oblasts of Western Siberia. But it is one thing to see reserves and plan measures while it is another thing to organize the work efficiently and intelligently, to provide for confident fulfillment of plans and commitments -- everything that has been earmarked.

Siberian grain occupies an important position in the grain balance of the Russian Federation. The kolkhozes and sovkhoses of Omskaya Oblast have achieved a marked increase in its production and procurements. While at the beginning of the 1960's the gross yield of grain averaged 1,821,000 tons, under the Tenth Five-Year Plan it was almost 3.5 million tons. And last year Omskaya workers harvested more than 4 million tons. The productivity more than doubled during this period.

But in Western Siberia as a whole grain production has decreased during the past 4 years. Altayskiy Kray, the main grain bin of Siberia, has not only not advanced in the productivity and gross yields of grain, but has even fallen below levels that were already achieved. Under the Tenth Five-Year Plan it annually harvested 850,000 tons of grain less than under the preceding five-year plan. Novosibirskaya workers have also lost ground.

How is this explained? After all, as scientists note, the kolkhozes and sovkhoses of Western Siberia have land with great potential for intensive development of crop growing and, above all, grain farming. The soil in the region is mainly of the productive chernozem type (up to 85 percent), which is capable of producing stable, sufficiently large crops. Nature herself has opened up the way for plowmen to cultivate many agricultural crops. In Altayskiy Kray it is possible to successfully raise not only grain, but also vegetables, potatoes, flax, sugar beets, hops and also fruits.

This has been convincingly demonstrated by the work of the advanced farms. The Zarya Altaya Kolkhoz, which is located in the arid Kulunda, from year to year raises and harvests more than 20 quintals of grain per hectare, crops that are twice as large as those of their neighbors and other farms which are located in similar or better climatic conditions. Each hectare of arable land, meadows and pastures is used efficiently on the Chikskiy Sovkhoz in Novosibirskaya Oblast and the Sibiryak Sovkhoz in Omskaya Oblast. And there are many farms like these in the region.

This means that to blame the rain, drought and other caprices of nature, which certain managers so frequently do that it has become a habit, is not a sufficiently complete explanation for their arrears. If one looks at the figures for the productivity of grain crops in the Altay during the last 9 years one can see how they jump: fall -- rise, fall -- rise. Just like the temperature chart of a patient with a fever.

Of course the party obkoms and kraykom are aware of these figures and analyze them. Some of them are mentioned from the tribunes of plenums or meetings of the aktivs. But the situation remains almost unchanged. Recently there was a meeting of the plenum of the Altayskiy Party Kraykom at which they discussed in detail the shortcomings and ways of eliminating them. A good decision was adopted. But what specifically is being done to implement it? And not only in grain farming, but also in other branches.

We visited the Novoaltayskiy Sovkhoz and were interested in what was being undertaken in order to increase the production and to deliver all the products from the fields and farms to the consumers. The Novoaltayskiy is one of the largest suburban farms which deliver vegetables and animal husbandry products to Barnaul. The head agronomist of the sovkhoz, A. Zvyagintsev, boldly announced that the farmers know their business, they are fulfilling the plan for the procurements of vegetables, and they are raising enough feeds. But some time later it became clear that the cows are maintained on a very slim ration. The amount of hay that is prepared is quite inadequate and sometimes of poor quality, the silage is running out, and there is not even enough straw to give the animals a complete norm of it. They go and request it from their neighbors. Hence the small milk yields. And the production cost of a quintal of milk at the complex -- it is terrible to admit -- exceeds 40 rubles. Each month immense losses are sustained from its production.

Several years have passed now since the dairy complex intended for 1,200 cows was constructed, but the herd is not yet complete. Only 840 animals are kept here.

"We have nothing to feed the animals so why increase their numbers?" the head zootechnician, V. Petrov, asks.

There is an "opinion" about the problem for you, there is the degree of responsibility. Can one really expect, then, that the situation will soon change for the better? Such indifference on the part of specialists is also apparent in another case. Last year rural workers of the sovkhoz raised good cabbage. But because of sluggishness and inefficiency, thousands of tons of strong juicy heads, gathered together into an immense heap, remained that way on the field into winter. The damage amounted at least to tens of thousands of rubles.

No, it is not only the rains and dry winds that impede the work, but most frequently references to them, the lack of demandingness of certain managers and specialists, the lack of organization and weak discipline.

Everyone we had occasion to meet in Omskaya and Novosibirskaya oblasts and in the Altay spoke with a certain amount of pride about the large amount of work that had been done in the last decade by agricultural workers and scientists for fighting against wind and water erosion, and introducing a soil-protection system of farming on millions of hectares.

Yes, a good deal has been done. And it is precisely where this system has been skillfully applied that the crops have increased significantly. In the steppe Kulunda of the Altay, because of the soil-protection complex, when it was introduced grain production increased by 50 percent during 5 years. In Odesskiy Rayon in the Priirtysh'ye area of Omskaya Oblast the productivity increased from 15 to 18.6 quintals from each of 100,000 hectares. The farms of this rayon received guaranteed stable crops even in years with the most difficult weather conditions and it is, as they say, a rayon that always has grain.

Everyone recognizes the advantage of the soil-protection system of farming, which provides for a stable increase in grain production, as well as the need for its introduction. We did not meet a single person who would doubt this. But the entire complex of agricultural measures is certainly not being applied everywhere. Certain of its elements are utilized and others are not. It is a paradoxical situation: there is a lack of system in the system itself. Scientists think that because of this alone Siberians fail to obtain 2-2.5 million tons of grain from their planted areas. And the chief of the Altayskiy Kray agricultural administration, I. Ovsyannikov, a specialist who is quite knowledgeable in this matter, continues to blame the bad weather. But who can deny that it impedes farming? But has it ever been any different? Bad weather has always "interfered" in the work of the plowman and confused his calculations. And the art of grain growing lies in being able to obtain a good crop under any unexpected circumstances. The more so since now the achievements of science actively help to surmount these difficulties. But the real reasons for the failures are different. It is known that fallow which is not plowed under in the autumn, crop rotations that are not assimilated, and the inability to work with fallow fields cause direct losses of the crop. The farms of Western Siberia are still unable to avoid these losses since they are still weak at solving the simplest problems related to the science of farming.

New strains open up large possibilities of increasing the yields of all agricultural crops. In recent years selection scientists have submitted about 80 new strains for testing, 40 of which have been regionalized. These include grain crops, oil-bearing crops, grasses, potatoes and vegetables. But how much area do these promising new strains occupy? In the grain fields, only 20 percent and in the fields planted in grasses -- 12 percent. Thus another chance is missed for significantly increasing the production of grain and other products.

Today the Siberians provide their own vegetables which are locally raised to a greater degree than they did 4 or 5 years ago. But they still do not produce enough of them: in Omskaya Oblast they produce 80 kilograms per

capita or 70 percent of the overall need; Novosibirskaya Oblast produces the same amount; and in the Altay they procure per capita -- 25 kilograms of vegetables and 30 kilograms of potatoes, or one-fourth of the norm.

Agricultural and trade administrations of Omskaya Oblast have nothing against talking about how much specialization in vegetable raising has produced. With the creation of the Omichka Association, they say, there has been a revolution in the branch. Most of the production of vegetables is concentrated here now and their production costs have decreased. This is true. But still the production of vegetables in the oblast has not increased, but decreased. Why? Something is askew in the specialization: many farms completely stopped raising vegetables when the association was created. They eliminated this branch for themselves. An abnormal situation arose wherein certain kolkhozes and sovkhoses, for example in Kormilovskiy Rayon, began to send trucks to the city for . . . carrots. Moreover, the farm managers find a "justification" for this. They say that it is more economically advantageous for them to ship vegetables from city stores than to raise them themselves. And nobody will seriously put a stop to such dependence.

Even less attention is devoted to vegetable raising in Novosibirskaya Oblast. During 4 years of the five-year plan the kolkhozes and sovkhoses have not once fulfilled the plan for the production of vegetables and potatoes. A number of rayons do not raise them even though the necessary conditions for this exist and therefore cabbages, carrots, and table beets are sent from rayon cities and villages hundreds of kilometers away. Moreover, the shipment of cabbages and fresh carrots to the stores of Novosibirsk is usually limited in March. But still certain managers have the impression that the problem of vegetables in the oblast center has been completely solved. Apparently this also results from overestimating what has been achieved.

The farms of Western Siberia have the greatest possibilities of developing a meat and dairy animal husbandry branch. The farms maintain more than 6 million head of large horned cattle, more than 2 million hogs, and 4.5 million sheep. An immense herd! But the productivity of the livestock is increasing very slowly and in a number of rayons it is sharply decreasing. For this reason last year, for example, they produced tens of thousands of tons less beef and pork than in the preceding year.

No matter where we brought the discussion around to the reasons for this situation -- in the party obkoms and kraykom, in the agricultural administrations, on the kolkhozes and sovkhoses -- everywhere we heard one reply: there is not enough feed. Moreover, this is given as a convincing argument, as if someone who was supposed to have delivered feed to the oblast or kray had not done so. But, after all, feed does not grow on city asphalt. And one need only analyze the overall situation in order to come up with the following picture: there are not enough feeds and at the same time they are being expended in an amount that is double the norm. How can this be? The fact is that the fattening of large horned cattle, for

example in the Altay, lasts 30 and more months instead of 15-18. This shows the extremely low level of the art of livestock raising.

The situation is no better in hog raising. This profitable branch which makes it possible to rapidly increase the production of meat, having reached a good level in the Altay several years ago, has dropped sharply. The number of hogs which previously amounted to more than 750,000 has decreased by almost half during the period of poor feed supply. The number of head has still not been fully restored. Many hog farms have been liquidated because there were supposed to have been specialized farms and complexes constructed which would rapidly increase production. But this increase has not taken place.

We met with the director of the Chumyshskiy Sovkhoz, V. Botov, and asked him to discuss why, with immense expenditures of feeds and labor, hog production is not increasing. It turned out that most of the labor on the farms is manual and the quality of the feeds is poor. The weight gain is extremely low.

The state does not spare funds when it comes to industrializing agriculture and changing the branches over to an industrial basis. Immense amounts of capital investments have been allotted for the creation of animal husbandry complexes in Western Siberia. And there should be a corresponding return. But what kind of effectiveness is there when it takes 10 years to construct the facilities and provide the herd for certain complexes? And the assimilation of their planned capacities takes even more years. For example, the Ozerskiy hog complex in the Altay should have begun to produce meat 1.5 years ago, but it is still under construction. And 1.5 years of operation of such an enterprise means 10,000 tons of pork. The state has not received them. Should someone be responsible for this? Of course, there is a specific person who can and should be held strictly responsible for the damage that has been caused -- M. Malkin, chief of the Altaysel'stroy Administration. But nobody has addressed him yet.

Or another example. The Petrovskiy Sovkhoz in Omskaya Oblast constructed a dairy complex and equipped it well. But because of a lack of the proper supervision the productivity of the herd of cows, from each of which they obtained 4 tons of milk, decreased by 25 percent. And this did not happen all at once. Could the specialists really not have taken the necessary measures on time? The sovkhaz director has now been released, but the matter is being rectified very slowly.

As we can see, there are many reserves for increasing the production of products from the fields and farms of Siberia, but some have just barely been revealed while others have not been touched upon at all. The low level of labor organization, mismanagement and poor introduction of the achievements of science are impediments. Shortcomings in the first section of a unified food complex inevitably affect other sections, even though these sections have their own problems. One of them is the quality of the products.

We shall discuss them in our next letter.

[7 May 80, p 2]

[Text] How are the Siberians' needs for vegetables being satisfied? Two years ago during a trip to the regions of Siberia and the Far East, Comrade L. I. Brezhnev said that the needs of the population for vegetables as well as other products should be satisfied more and more fully through their local production.

A good deal has been done in this area. But far from everything. We visited trade enterprises and were interested in how the consumers' demands were being satisfied. We saw how vegetables, fruits and potatoes are stored and saw whether all of them reach the grocery counters.

The Dary Poley store of suburban Zarya Sovkhoz is located in a modern new building on the left bank of the Irtysh where a large microrayon of Omsk is growing up. The store is well equipped. In the windows are fresh and fermented cabbage, radishes, onions, table beets and carrots. The customers with whom we spoke were satisfied with the service and the policy, but still they expressed a number of wishes.

"We would like to see a wider selection of vegetables in the store," they said. "Potatoes always used to be for sale at this time. But this year for some reason or other they are rarely shipped in and there are not enough of them. One must stand in line."

V. Lomakin, the chief of the city trade administration, heard this conversation. He explained that during the winter they had procured and already sold as many potatoes as last year. But the problem is that more of them were consumed than usual since the private subsidiary farms produced and stored fewer potatoes than ever before. A clear mistake. It is necessary to be able to determine the consumers' demand precisely.

This self-critical admission somehow explains things, but the problem remains unsolved. It would be incorrect to speak of this as an accident, an unexpected mistake. The creation of the Omichka Association in the suburban zone of this city with a population of a million and the development of specialization in vegetable raising have produced great advantages. But they are only partially utilized. Therefore the procurements of vegetables in recent years have remained essentially on the same level. Of all the garden products raised in the oblast, 55-60 percent go to the storehouses, stores and dining rooms. And this is considered an achievement. It was explained to us that there was a time when the volume of procurements did not reach even half of the amount of products produced and during some years they amounted to only one-third of the gross yield of vegetables.

"At one time up to 30,000 tons of unsold vegetables and potatoes went to feed livestock," says the chief of the Omskaya Oblast trade administration, A. Kisilitsyn, "and now only 5,000 tons go for this."

Here is the situation: There are not enough vegetables, but still some of them are used for feeding livestock on the farms -- that same white cabbage that one rarely sees in the stores now, during these spring days. Why? There are not enough storehouses and not enough possibilities of pickling and preserving garden products. The RSFSR Ministry of the Food Industry does not have a single enterprise for processing vegetables in such a large oblast of Siberia as Omskaya. As a result, canned borshch, beet soups and carrot soups are shipped here from the central and southern oblasts of the Russian Federation and from other union republics -- which are sometimes thousands of kilometers away. The state must pay immense transportation expenses. Yet these same vegetables which are raised on Siberian farms do not always find a market.

There is a similar situation in Novosibirskaya Oblast. There are only two canning plants in the Altay: the Povalikhinskiy and Biyskiy. These are small enterprises which cannot process the raw material that is provided by the farms of the local trust of vegetable and potato raising sovkhozes.

"Last year," said the director of the trust, Ya. Dugnist, "we produced the necessary quantity of vegetables according to the agreement with the procurement workers, but not all of them were accepted."

It is not simply that the procurement organizations have been sluggish. They have one small secret. If they accept vegetables from the farms at the end of July, for example, they pay 650 rubles for each ton of cucumbers and if they accept them in August, they pay only 400 rubles. So they try to put off the procurement time. But then the ripe vegetables are late in reaching the consumers. Later it is necessary to sell products that are good but already overripe as substandard. This is to the detriment of the farms and the consumers, but . . . not to the detriment of the procurement workers.

The canning plants do exactly the same thing with the common interests in their striving for commercial gain. Last year they accepted more than 1,300 tons of vegetables for processing from the Altay trust in violation of the agreement.

The plants are poorly equipped and use a lot of manual labor. The managers are "simplifying" the technology. Hence large expenditures and high production costs.

Last year 234,000 rubles were spent on the preparation of canned borshch. But it was sold at a lower price and so 27,000 rubles were lost. The Povalikhinskiy and Biyskiy plants operate at a loss and are always being supported by subsidies just as a person who is ill is supported with oxygen.

It has long been time to place the entire Siberian processing industry on its feet and seriously strengthen its material base for storage.

Yes, Siberia is rich and its capabilities are great. But one cannot approach their utilization only from the consumers' standpoint. It is necessary to conduct the matter in such a way that capital investments actively influence the creation and development of the agro-industrial complex. For example, questions of producing machinery, equipment and fertilizers should definitely be resolved with the same responsibility and expediency as questions of coal extraction and petrochemistry. The capacities of the meat processing industry of the Altay today provide for only three-fourths of the receiving of procured animal husbandry products.

"And, after all, our area," said the secretary of the party kraykom, V. Mishchenko, when speaking at the Siberian conference on social planning, "could extensively develop the production of canned meats and other meat products for long-term storage for the miners of the Kuzbass, the Trans-Baykal area and Noril'sk as well as for the builders of the Baykal-Amur Mainline. Unfortunately, it is still thought that it is more advantageous to ship canned goods in from Central Asia and even from Moldavia and to export Altay livestock for processing outside the area. It is precisely this that explains, to a certain degree, the fact that planning organizations have rejected our proposals for the construction of two meat combines in the Altay area."

Siberian agriculture requires more attention from the point of view of scientific-technical and material support. There is a critical shortage of pipes and heating equipment for vegetable growing on covered areas, a practice which is now developing. The container method of shipping and storing potatoes produces an immense economic effect and they are striving to introduce it as extensively as possible in all zones of Siberia. But there are not enough containers and they are manufactured independently, through the efforts of local enthusiasts and skilled craftsmen.

Another problem is that not all party organizations have a feeling of concern for solving problems of a unified food complex. The activity of the communists of the Altayskiy Kray agricultural administration lacks business qualities and responsibility for the part of the work entrusted to them. The party committee and party organizations of the divisions of the administration, when solving problems, frequently only duplicate economic measures. The party kray committee should, of course, devote more attention to party organizations of the staffs of the administrations, since omissions here are reflected in the affairs of many collectives.

There is yet another powerful force which should move all branches of the region's agriculture. This is science. How does it affect the units of the Siberian food conveyor? During the 10 years of its activity, the Siberian Branch of VASKhNIL has turned into a large scientific and methodological center. One can turn to it with practically any problem: research is being done by 23 institutes, a special design bureau, 17 experimental stations, 65 experimental production farms and about 1,000 doctors and candidates of sciences. Under this five-year plan alone, they have produced

dozens of valuable developments concerning new technologies for the cultivation of agricultural crops, for producing the basic animal husbandry products, and for creating highly productive strains of grain crops, potatoes, vegetables and grasses. It has been calculated that the Novosibirskaya-67 strain of wheat alone, which now occupies 1.5 million hectares, provided 20 million rubles in additional income for the kolkhozes and sovkhoses.

But there are still many unsolved problems here as well. How does one achieve a steady increase in yields? How does one arrange feed production? How does one explain the poor productivity of livestock and what must be done first in order to increase it? The problems are serious. Science, of course, gives explanations, advice and clarifications. But life now requires more of it. Scientists are called upon to be not only propagandists of innovations, but also organizers of their introduction, to occupy an active position, and to firmly combine theory and practice. But in practice, unfortunately, there are not many cases like this.

The recommendations of the Scientific Research Institute of Feeds include a broad system of measures for the organization of a feed base for animal husbandry complexes. Where can one see a model of these scientific ideas? Most likely on the experimental farm which belongs to the institute. Therefore we went to the Posevnoye experimental production farm. Its director, Comrade Konakov, was clearly disturbed when he learned the purpose of our trip.

"Actually, it is difficult to talk about good results from the introduction of scientific developments," he noted.

And we were convinced that it would not only be difficult, be even impossible to talk about them. The experimental production farm of the institute of feeds shows how one should conduct animal husbandry. In the dairy complex it is dirty, the feed is thrown around, and it is distributed in unsuitable form. Although feeds are expended in excess of the norm, the productivity of the cows is not increasing, but is decreasing. During the past 2 years the average milk yield from each 1,100 cows dropped by almost 300 kilograms and its production costs increased. Last year alone the losses from milk production amounted to 69,000 rubles. This year the situation is even worse. The farm has been given the responsibility for producing grass seeds. The plans are not being fulfilled.

What is the role of the scientific institution here? Can its recommendations to other kolkhozes and sovkhoses really have any authority if they are "introduced" this way on the base farm? But still the director of the Scientific Research Institute of Feeds, I. Ya. Ovcharenko, is optimistic. When he speaks about the future it is as if he does not notice the fact that today was the future yesterday. After all, during the 10 years of the institute's existence the farms of Siberia have essentially not taken a single step forward in the matter of improving feed production. The institute has still not developed comprehensive recommendations for feed production or for transforming it into a highly intensive branch. It is

precisely here that one finds the reason for the arrears in animal husbandry in a number of rayons. In a situation like this, cheerfulness and optimism simply lead to delusion.

The serious imperfections of the scientific institutions of the Siberian Branch of VASKhNIL are also noticeable with respect to other problems. Research into the development of better zonal systems of farming is not being conducted comprehensively. Serious arrears have been allowed in selection and seed growing of certain agricultural crops. Research into soil-protection farming has been unjustifiably halted in certain oblasts. Recommendations regarding other problems are being developed slowly.

Siberian scientists have begun to develop a broad program which should earmark ways of further specialization of institutes and their modes of interaction in solving crucial problems in the development of the region's agriculture. Obviously, research into problems of a unified food complex, as they were designated in the speech of Comrade L. I. Brezhnev at the November (1979) Plenum of the CPSU Central Committee could be envisioned even now in this program for the scientists.

Siberia -- an immense and wealthy area -- has still not revealed all of its capabilities. With the help of science and the efforts of agricultural workers, it will reveal them fully.

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CSO: 1824

REGIONAL DEVELOPMENT

UKRAINIAN AGRICULTURAL MINISTER ON LAND RECLAMATION, IMPROVEMENT

Kiev PRAVDA UKRAINY in Russian 1 Apr 80 p 2

[Interview with UkSSR Minister of Agriculture M. V. Khorunzhiy by RATAU correspondent: "Multiplying the Power of the Hectare"]

[Text] The general plan of utilization of land resources and also the scheme of land tenure regulations for each oblast and rayon were worked out together with agricultural organs by republic scientists and specialists of Ukrsemproyekt Institute. This will make it possible to solve within a single complex the practical tasks of agriculture and territorial development of industry and other sectors of the national economy.

The means of achieving this program, which is planned for up to 1990 were requested by an RATAU correspondent to be discussed by UkSSR Minister of Agriculture M.V. Khorunzhiy.

[Minister's initial comment] The development of a general plan of utilization of land resources was due to the accelerated development of agriculture and other important sectors of the economy requiring long-range planning and forecasting. One of the chief tasks is proper distribution of land resources among the sectors with observance of priority of use of the most fertile lands for agricultural production. It is namely about this that Comrade L.I. Brezhnev writes in the book "Virgin Land": "...land tenure regulations are a kind of general plan determining the configuration and character of a farm, the location and size of its fields, meadows, pasturages, places for the construction of the central buildings, water-supply sources and much else that is very important for life and production."

In the long term, the development of the republic's agriculture will be achieved under conditions of most effective use of land resources and high level of development of land suitable for agriculture use. The accomplishment of the proposals existing in the general plan will make it possible to additionally involve in intensive turnover several hundred thousands of hectares of new areas. Through this means and also through the boosting of soil

fertility, gross yields of grain, sugar beet, potatoes, vegetables and sunflower seeds will be increased. The volumes of all types of produced products will grow significantly in practice.

[Question] Mikhail Vasil'yevich, but where can these additional hectares be found? The fact is that thousands of hectares are withdrawn yearly from agricultural use for the expansion of housing, industrial and other types of construction and various needs.

[Answer] True, areas for industrial and other national-economic installations are increasing from year to year. But we are not just giving up land. A large amount of work is being done, and this is in the area of recultivation following mining of mineral resources and construction. Each year 15,000 hectares of land are returned to agricultural use. Of these, about half are returned to plowland. For example, enterprises and organizations of Dnepropetrovskaya, Donetskaya, Sumskaya, Chernigovskaya, L'vovskaya and Krym'skaya oblasts will return to farms thousands of hectares of restored lands. And, of course, these lands even now have to be taken into consideration in planning of production output.

Moreover, we are doing everything possible to put the most fertile areas to direct use. For industrial and other needs we are setting aside primarily poorly productive lands.

[Question] Clearly, recultivation of lands does not fully solve the problem?

[Answer] Of course, increase of the area of agricultural lands will be basically done through putting to use reclaimed swamps, areas occupied by shrubbery, stony localities, sands, salt flats and other poorly productive and unused lands. The republic, for example, has acquired much experience in fixation of gullies and prevention of the formation of new ones. There have been planted for this purpose more than 500,000 hectares of forest cover. Afforestation of gullies is planned to be continued. Areas are being reduced for farmyards and structures and an open network of drainage canals and field roads. Thus in Chernigovskaya and L'vovskaya oblasts alone, it is planned to rebuild old, mostly technically inferior land-improvement systems which lack water-regulation structures. Here closed drainage will be built, thanks to which agricultural lands will be increased by almost 7,000 hectares.

By accomplishing these and other measures, we are getting each hectare of land to "work" as productively as possible.

[Question] That is, the main course is further intensification of agricultural production?

[Answer] Without a doubt. We see in this our chief direction. On recommendations of scientists, it is planned to increase over the long term the area of clean fallow lands, which naturally will result in a certain

curtailment of sowings of fodder crops. But fodder production volume will be made up through increasing productivity of natural fodder fields, the creation of cultivated meadows and pasturages and increased production of forage grain and mixed feeds. And the use of fallow lands will make it possible to obtain large and stable yields of grain crops in the dry rayons of the republic.

In intensification of agriculture, a special role is being assigned to land reclamation, protection of soil from water and wind erosion, chemicalization and other measures. It is envisaged that the area by 1990 of irrigated and drained lands will have significantly increased. Moreover, there will be conducted on large areas liming of acidic and application of gypsum to solonchaks soils. The use of mineral fertilizers is to be increased: application of mineral fertilizers per hectare of plowland in the republic will go up to 8-10 quintals and that of organic fertilizers--to 10 tons.

In the course of the projected period, it is planned to complete complex mechanization of agricultural production. Yearly deliveries of tractors, combines and other equipment will be increased.

All this will make it possible to successfully fulfill a most important task set by the 25th CPSU Congress--to attain reliable provision of the country with foodstuffs and agricultural raw materials.

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CS0: 1824

REGIONAL DEVELOPMENT

WORK OF CENTRAL ASIAN BRANCH OF VASKHNIL CRITIQUED

Tashkent SEL'SKOYE KHOZYAYSTVO UZBEKISTANA in Russian No 4, Apr 80 pp 17-18

[Article: "Improve the Efficiency of Scientific Research"]

[Text] The annual conference of the Central Asian Department of VASKhNIL discussed the results of last year's work and the programs for 1980.

"The work of the department Presidium and its institutes has been directed at implementing the decisions of the 25th CPSU Congress and subsequent plenums of the party central committee and decrees regarding maximum effectiveness of agricultural science and the strengthening of its ties with production," pointed out VASKhNIL Academician S. Yuldashev, VASKhNIL vice president and chairman of the Presidium of the Central Asian Department, in his regular report. "The Presidium has strived to actively influence the organization and carrying on of scientific research. Urgent work has been done to expand research on the basis of comprehensive programs. As early as 1978 they were organized on a regional level by four complex topics: increasing yields, improving the quality of raw cotton, improving watering equipment and technology, increasing labor productivity in cotton growing, and specifying effective measures in the campaign against weeds. Fifteen regional complex problems were suggested for the 11th Five-Year Plan."

A projection of agricultural development in natural economic regions and for the Uzbek SSR as a whole was drawn up. It will serve as the initial base for the planning and long-range development of specialization and concentration of agricultural production up to 1990-1995. Recommendations were drawn up for the basic trends and organizational forms of production cooperation in the cotton planting zone. Recommendations were prepared for the organization of production and labor in plant growing and animal husbandry under conditions of complex mechanization. Their adoption has made it possible to obtain an annual saving of over 500,000 rubles.

Considerable success has been achieved in the field of selection and seed growing. A new wilt-resistant highly productive variety of cotton, AN-402, was regionalized last year. It was planted on an area of 22,000 hectares. The following wilt-resistant varieties were tested under

production conditions on large areas: Andizhan 2, Tashkent 6, AN-Samarkand 2, AN-Uzbekistan 3, and others. This year three new varieties of cotton, the Karshinskiy variety of barley, Aridnaya alfalfa, Kantlik sorghum, Uzbekskaya 5 white durra, and the Bakhmal'skiy 1056 variety of flax are being regionalized. The Tazym variety of barley has been recognized as promising. A large number of new varieties of agricultural crops created in scientific research institutions in the region are successfully undergoing state and production testing. Initial seedgrowing and reproduction are being conducted for all regionalized and promising varieties.

In recent years scientists have proposed and already introduced into production intensive plans for cotton crop rotations, taking into consideration the specifics of various zones in the region. Thanks to crop rotations, the overall level of agriculture has risen not only in cotton raising, but also in other branches of plant growing.

The study and introduction of a system of fertilizers guaranteeing optimum conditions for plant nutrition throughout the entire vegetation period are continuing.

An efficient complex of measures has been developed in the campaign against soil erosion. Agricultural and chemical means of combatting weed growth have been extensively studied and recommended. The selection of the most effective and environmentally safe defoliant is continuing.

Chemicals with a low level of toxicity are being identified for use against pests on many crops, and local species of trichogrammae have become highly effective in the campaign against turnip moth larvae.

The range and destructiveness of fusarium wilt has been determined for varieties of fine-fiber cotton in Kashkadar'inskaya Oblast in the Uzbek SSR and in Maryyskaya Oblast in the Turkmen SSR.

We have determined the basic trends for increasing labor productivity in vegetable growing and discovered reserves for increasing yields and improving product quality. The main problems of the technology for cultivating gardens and vineyards have been refined and new high yield varieties have been created.

In the field of animal husbandry and veterinary medicine there has been research to improve and create new types and strains of dairy and meat cattle, astrakhan, meat-wool, and fat-tailed sheep, goats, hogs, horses, and hens and turkeys and also to increase the number of pedigreed animals. Work has been done on breeding reproducers of large and small horned livestock and selection and genetics stations for poultry raising which have been organized in recent years. Large-scale selection has been carried out on 12 breeding farms. In experimental herds milk productivity of cows reached 4,800 kilograms for black-mottled cattle, 3,066 kilograms for and 3,987 kilograms for

Work has been completed on creating two new strains of black-mottled cattle.

A number of new varieties of feed crops (selected by the Uzbek Scientific Research Institute of Animal Husbandry) have been created for feed production; several of them have been submitted to the State Commission for Variety Testing. Updating of procedures for the creation and technology of cultivated pasture utilization in irrigated and non-irrigated zones of the republic has been completed.

A broad spectrum of research into a series of infectious, invasive, and noncontagious diseases of agricultural animals and birds has been carried out. Measures for combatting and preventing a number of diseases have been developed.

Silkworm scientists have developed and submitted for state testing three hybrid silkworms and have developed five promising types of mulberries, with three additional types under going testing. Research has been completed and recommendations worked out for multiple feedings of silkworms and for the use of parthenogenetic material for industrial hybridization. They have found a way of obtaining and storing silkworm eggs for various terms of mulberry silkworm feeding, and they have devised a plan for a system of instruments and machines for complex mechanization of silkworm growing for the years 1981-1990.

Much work has been done in the field of hydraulic engineering and land management. In particular they have developed a device for playing out and picking up flexible irrigating hoses and a sprinkler machine with frontal action. They have proposed asbestos cement pipe for the casing of vertical drainage boreholes which will cut construction costs of drainage wells almost in half. They have developed automation of water distribution from the gutter system and are experimenting with trickle irrigation which assures a high rate of efficiency by the irrigation system. Methods have been found for rapid desalinization of soils which are heavy in mechanical composition.

On the fields the attention of scientists was previously devoted to problems of maximum expansion of mechanization and electrification of agriculture. Plans have been developed for technological maps for cultivation and harvesting of cotton and other crops and also for animal husbandry and silkworm cultivation for the period 1981-1985 and a system of machines for the period 1981-1990.

At the same time, the speaker noted, there are serious shortcomings in the work of the department. The potentials of scientific research institutes and their skilled cadres are not being sufficiently utilized to solve the most important scientific and technical and socio-economic problems in the village; little is still being done in regard to major problems of increasing intensification and efficiency in agricultural production.

The Presidium of the Central Asian Department of VASKhNIL has poorly utilized the power given it to coordinate scientific research and has not achieved a concentration of the efforts of scientific institutions for joint resolution of the most pressing theoretical and practical problems.

The work of establishing an economic basis for efficient forms of interfarm cooperation and agro-industrial integration, as well as basic trends in agricultural development in combination with other branches of the agro-industrial complex must be strengthened significantly.

Research in the area of feed production and its conversion to an industrial basis is proceeding poorly. Scientists have not been completely successful in eradicating and preventing animal tuberculosis and brucellosis and improving veterinary-sanitation services to major animal husbandry complexes and farms.

The return is also low from research on fine-fiber cotton and efforts to increase the efficiency of mineral fertilizers, herbicides, and new non-toxic defoliants and desiccants.

VASKhNIL Corresponding Member A. Tsamutali reported on the 1980 research plan. For the region as a whole 49 problems and 57 programs at the state level and 45 departmental programs will be studied. The department will give priority to developing the science of cotton growing. In 1980 the efforts of scientific research institutes and scientists are being concentrated on the study of such basic problems as investigation of methods for the accelerated development of high-yield, disease-resistant varieties of cotton, development of industrial technology and machine complexes for cotton cultivation, an increase in the efficiency rate of irrigation systems, and investigation of new irrigation methods and techniques.

Department institutes will participate in work on three state problems relating to mechanization and electrification of agriculture.

One important course in the scientific investigation of the region's institutes is work on problems concerning a stable rise in grain production.

Major complex problems will be resolved in the fields of animal husbandry and veterinary science, sheep raising, horticulture and viticulture, irrigation and land improvement, sericulture, and crop protection from pests and diseases.

Pressing problems connected with the new stage in the implementation of the Leninist cooperative plan, inter-farm specialization and concentration, and agro-industrial integration is also on the agenda. A comprehensive review of problems of regional and republic agro-industrial complexes is planned. Problems of improving material incentives for agricultural workers, increasing the efficiency of capital investments and consolidating cost accounting will also be treated.

The following devoted their speeches to important problems of improving the effectiveness of scientific research and planning and coordination of scientific research: T. Zinin, corresponding member of VASKhNIL and head of the agriculture section of the Central Committee of the Communist Party of Uzbekistan, N. Khamrayev, chief of Main Administration of Central Asian Sovkhoz Construction, A. Khudaykuliyeu, corresponding member of VASKhNIL and director of the Turkmen Institute of Agriculture, R. Mustakimov, head of a chair at the Tadzhik Agricultural Institute, M. Mirzayev, corresponding member of VASKhNIL and general director of the NPO imeni R. Shreder, A. Kadyrov, director of the Central Asian Scientific Research Institute of Irrigation, Sh. Akmal'khanov, corresponding member of VASKhNIL and director of the Uzbek Scientific Research Institute of Animal Husbandry, and others.

Deputy Chairman of the Uzbek Council of Ministers R. Ashuraliyev and Responsible Worker of the CPSU Central Committee I. Ruday took part in the work of the conference.

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ADVANTAGES OF SUBSIDIARY FARMS REVIEWED

Moscow STROITEL'NAYA GAZETA in Russian 12 Mar 80 p 1

[Article: "The Subsidiary Farm"]

[Text] The Russian language has a precise, expansive word -- "to help [podsobit']". It means to assist, to support, to render assistance, and to be a bearing for something. It is precisely this sense that is incorporated in the subsidiary [podsobnoye] farm, which provides assistance in increasing the production of meat, milk, and vegetables. But this task ranks among the most important. At the November 1979 Plenum of the CPSU Central Committee Comrade L. I. Brezhnev said in his speech that providing an uninterrupted supply and producing a sufficient and wide variety of high quality food products are one of the most important goals stemming from the party's course of improving the workers' well-being.

Practice in our branch has proven the effectiveness of this form of improving the organization of public dining. Enterprises of the RSFSR Ministry of the Construction Materials Industry are emerging as leaders in this field. It is of general value that here they are actively adopting the experience of leading collectives. They have reviewed it at the collegium of the ministry; it has been studied at seminar-conferences which took place directly on the better subsidiary farms. A special brochure has been published and distributed everywhere. Here is the result: 3 years ago subsidiary farms were in operation at 20 enterprises, but by the beginning of the current year their number had increased more than 10-fold. Now the collegium has adopted a decision: by 1982 all 420 ministry enterprises must have agroshops.

They will be established mainly through utilization of internal industry resources and reserves, as a rule, without involving state capital investments and funds for feed. Exhaust steam is used to heat the greenhouses; fish are bred in quarries which are not subject to recultivation; their own feed base is to be established by developing unproductive, swampy lands.

Take, for example, the Strizhi Silicate Plant. Using the widely publicized experience of the Pervomayskiy Glassworks, they established an outstanding

subsidiary farm here in only 2 years. The hog farm has 400 head (and, what is very important, they organized the reproduction of the stock here). Two greenhouses produce cucumbers and green onions; a fishery has been established in quarry shafts; they have begun to raise ducks and breed rabbits. After the vegetable storehouse was finished, they began to build a cow barn and two more greenhouses. Initiative, enterprise, and purposefulness -- these are the qualities which distinguish economic and trade union leaders at this plant who saw in the establishment of their agroshop not just its productive, but also its social side.

The people of Kurgan are doing interesting work. Such organizations as the Kurgansel'stroy Administration, the Kurgangrazhdanstroy Trust, the ZhBI-1 Plant, and others are undertaking shared participation in erecting a hog farm, poultry houses, and a cattle farm and then, on the basis of a contract, they receive a specific proportion of the animal husbandry products for public dining facilities for their collectives. You see, not every construction organization can establish its own subsidiary farm. Hence a survey is needed, and initiative (let us stress this once more) is needed. For example, at the Primorskiy Production Association for Construction Materials they were able to regulate the fattening of hogs so that not only did they satisfy the enterprises' public dining needs, but they also began to sell shoats to individual farms.

The agroshops, as a rule, are advantageous in many regards. They are becoming an important additional resource for improving the nutrition of construction workers and members of their families; they assist in strengthening the cadres and promote the creation of a good microclimate in the collectives. Moreover, subsidiary farms are quite economical. For example, at enterprises of the RSFSR Ministry of Construction Materials the utilization of heat and exhaust steam which go to raise vegetables in greenhouses provided an opportunity to save more than 200,000 rubles in only one and one half years and the utilization of food scraps to fatten hogs saved the state 750 tons of grain and 60,000 rubles.

Fresh vegetables and dairy products produced by the collective of the subsidiary farm of the Magnitostroy Trust are supplied to the dining rooms of construction workers in Magnitogorsk, to children's enterprises, and construction projects at some distance from the city both winter and summer. The farm now has over 2,500 head of cattle, a dairy herd, and several thousand hogs. The covered ground alone produces over 1,000 tons of vegetables a year. The farm sells surplus products to the store. A poultry factory for 500,000 layers is under construction, and there are plans to begin to raise mushrooms and flowers. There are also plans for an overall expansion of the subsidiary farm as a whole. Of course the Magnitogorsk construction workers have both the opportunities and the traditions. But, you see, they too began from scratch. Their scope and bold approach to solving such an important problem can and must be learned by many.

Of course, it is easier to organize a multi-branch subsidiary farm under conditions of stationary production. Although even here there are leaders

who shun this matter in every way possible. Enterprises of the construction materials industry in republics which are favorable for the development of subsidiary farms, such as Georgia, Armenia, Kazakhstan, and Tadzhikistan, either do not have subsidiary farms at all or only plan to establish them. The majority of the construction ministries are also not very concerned about the development of agroshops. We can understand their difficulties, but we must not justify their inaction. Moreover, in reference to the largest construction projects in Siberia and the Far East and the remoteness from their home areas, the question of the uninterrupted supply of milk, meat, and fresh vegetables to the workers becomes especially acute.

Trade unions play an important role in organizing this matter. Construction materials enterprises and construction organizations face the goal of achieving complete independence in supplying such products as meat, milk, eggs, and vegetables. Many collectives list among their obligations paragraphs dealing with their participation in subsidiary farm matters. The decision to establish agroshops is included in collective agreements. Those trade unions organizations which have assumed control of all facets of this varied work are acting correctly.

Beginning with this year, the best 100 subsidiary farms will be granted certificates of the ACCTU and monetary awards (up to 3,000 rubles). The USSR Ministry of the Construction Materials Industry and the central committee of our trade union established a transferrable red banner and monetary awards as incentives for the leading agroshops of enterprises. All these and other measures are intended to improve this very important matter given current conditions. It must be resolved rapidly and wisely according to the state method. You see, in the final analysis we are talking about people's well-being.

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SUCCESS, PROBLEMS OF SUBSIDIARY FARMS REVIEWED

Moscow SOVETSKAYA TORGOVLYA in Russian 25 Mar 80 p 1

[Article: "The Potentials of Subsidiary Farms"]

[Text] Comrade L. I. Brezhnev, secretary general of the CPSU Central Committee, speaking at the November 1979 Plenum of the party central committee, said that "guaranteeing the uninterrupted supply of and the production of high quality food products in adequate amounts and a wide variety is one of the most important goals stemming from the party's course toward improving the workers' well-being." In connection with this Comrade Brezhnev pointed out the need for a significant increase in meat production.

Enterprises and organizations of the trade and public dining system can and must make a contribution toward meeting this goal. In 1979 subsidiary farms of the state trade system produced 104,700 tons of pork (live weight). However, the result would have been better if the planned targets for fattening livestock had been met by all the union republic ministries of trade. The Belorussian and Georgian ministries of trade lagged especially far behind. The plan for meat production was met only 53.2 percent by the Belorussian ministry and 55.2 percent by the Georgian. The RSFSR and Ukrainian ministries of trade met their goals better than the others, although not fully. The same applies to the Main Administration of Workers' Supply of the Ministry of Railroads and workers' supply administrations of the Ministry of the Petroleum Industry, Ministry of Ferrous Metallurgy, and the Ministry of Timber and Wood Processing Industry. Among those which failed to meet the 1979 plan was the workers' supply administration of the Ministry of the Coal Industry which had the highest targets among workers' supply administrations and which was one of the first to begin to seriously develop the fattening of hogs on food scraps.

The lagging behind the plan is to a considerable degree the result of unsatisfactory delivery of young animals for fattening by kolkhozes and sovkhoses. However, as inspections have shown, directors of many trade organizations have not been sufficiently energetic and resolute in obtaining the fulfillment of decisions on delivery of young animals adopted by the

local agencies. In the Ukrainian and Georgian SSRs they are delivering hogs weighing 90 to 100 kilograms instead of 25 to 70 kilograms to the subsidiary farms for fattening. The feed expended on them is not repaid by a substantial increase in weight gain.

In view of the complex situation with regard to the delivery of young animals, their reproduction on the subsidiary farms themselves is becoming very important. In the fourth quarter of last year trade organizations in Tyumenskaya Oblast had for fattening 34,000 hogs which had been reproduced on the farms. They had obtained 46,000 piglets here in this manner for the year as a whole. The entire herd of porkers was obtained by reproduction on the Berezhnyakovskiy Sovkhoz of the Tyumenskaya Dining Room Trust itself. It was no accident that the 1979 plan for weight gain was met 139 percent by oblast trade organizations.

Subsidiary farms in Novosibirskaya and Omskaya oblasts are successfully reproducing their own young animals. This means that if the matter is given sufficient attention and if a material base is established, it is possible to solve the problem of young animals by one's own means if the need arises.

Serious oversights in developing a material and technical base of hog-fattening farms has had an adverse effect on the meeting of weight gain plans in a number of republics and oblasts. For example, 2 years ago pig-sty covers were in a deplorable conditions in the Mikhaylovskiy and Revdinskiy divisions of workers' supply and the Kamensk-Ural'sk production supply unit in the workers' supply administration system of the Ministry of Nonferrous Metallurgy. However, the construction of new shelters is moving very slowly. As early as 1977 construction was supposed to begin on a pig-sty housing 500 hogs at the Novopolotsk Dining Room Trust in the Belorussian SSR, but work did not begin until the end of last year. Such examples, and there are many, attest to the underestimation of the importance of hog fattening by a number of trade organizations. Still there are those who do learn. Excellent mechanized complexes geared to fatten 10,000 to 30,000 hogs per year have been built in the past 4 years by dining room trusts, associations, and public dining administrations in Gor'kovskaya, Omskaya, Rostovskaya, Chelyabinskaya, Kirovskaya, and Tyumenskaya oblasts, Krasnodarskiy and Primorskiy krais, and the Tatarskaya ASSR. Here the correct path has been taken toward creating precisely the large farms for which the means and resources of the industrial enterprises and trade and construction organizations are being combined.

Effective measures are being adopted to strengthen the material and technical base of hog fattening in the Uzbek and Kirgiz SSRs and in a number of oblasts in the Ukrainian SSR.

The development of hog fattening in the trade organizations system is based on the use of food scraps in the animals' ration. This makes it possible to save a large quantity of concentrated feed, which is in short

supply. Therefore, it is important everywhere to organize the collection of all food scraps from the public and from public dining enterprises and to use these extensively for hog fattening. However, there have been serious oversights in this matter. Although farms in the ministry of trade system used 5.1 percent more food scraps for fattening hogs in 1979 than in 1978, the plan for their collection and delivery was met only 91.3 percent. Only the ministries of trade of the Ukrainian and Uzbek SSRs met their plans. Organizations of the ministries of trade in the Moldavian, Turkmen, Azerbaijan, and Kazakh union republics collected even less food scraps than in the preceding year.

The proportion of food scraps in hog rations on ministry of trade farms averaged 49.2 percent overall, but only 34 percent in the Kirgiz SSR, 36.8 percent in the Georgian SSR, and 29.6 percent in the Uzbek SSR. It was especially low on farms in a number of workers' supply administrations: 20 percent for the Ministry of Transport Construction, 21 percent for the Ministry of the Timber and Wood Processing Industry, 26 percent for the Ministry of Ferrous Metallurgy, and 26.1 percent for the Ministry of the Gas Industry.

The fact that things can and must be done differently is demonstrated by the experience of leading farms: the Levoberezhnyy Sovkhoz of the Novosibirsk Public Dining Administration, the Zarech'ye Sovkhoz of the Kirovo City Obshchestvennoye Pitaniye Association, the subsidiary farm of the city of Kagan, Bukharskaya Oblast, Uzbek SSR, and many others where food scraps are fully collected and well processed and where they constitute not less than 60 percent of the hogs' ration. In the process the daily average weight gain for the animals is over 400 grams.

Recently the Collegium of the USSR Ministry of Trade reviewed the problem of organizing hog fattening on subsidiary farms and fattening centers of the ministries of trade of the RSFSR, Ukrainian SSR, and Uzbek SSR and the worker supply administration of the USSR Ministry of the Coal Industry. The decision of the collegium provided for specific measures for eliminating shortcomings and developing to the maximum the fattening of animals on food scraps. Implementation of these measures will permit certain fulfillment of the 1980 plan for weight gain and will provide a considerable additional quantity of meat.

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ADVANTAGES OF SUBSIDIARY HOG FARMS PRAISED

Moscow TRUD in Russian 1 Feb 80 p 3

[Article by B. Gol'dman, director of the Kagan City Trade Office, Bukharskaya Oblast: "It Is Advantageous from All Standpoints"]

[Text] The Kagan City Trade Office (Uzbek SSR) is fattening 10,000 hogs on its own subsidiary farm. The cost of one kilogram of pork is one of the lowest in the country. Public dining enterprises in the town and the culinary shops have a wide selection of excellent quality pork products. How have such results been obtained?

When we undertook this venture, there was no lack of sceptics. They told us straight out: you are out of your field; you will fail completely -- you are trade system workers, not animal husbandrymen.

But the trade system workers were burning with a desire to create a farm. You know, in addition to assisting in the supplying of pork to trade enterprises, success promised obvious, large profits. Plans were made for highly profitable, income-producing production. How could a specialist who knows the fine points of economics and of cost accounting and who comes in daily contact with the problems of meat rations for many thousands of people resist such a prospect?

Thus, the first serious argument for setting up our own large hog farm was the prospect of a stable supply of meat for public dining. The second was cheap feed which had actually been thrown out. You know, quite often we are spendthrifts. There are dozens of public dining enterprises in the city -- dining rooms, cafes, and restaurants, and every one of them accumulates a large amount of table scraps every day. When we added it up, we were startled -- more than 6,000 tons of food scraps a year!

And that is by no means all. The dairy in Kagan constantly has problems with the sale of whey and other milk byproducts. The karakul plant in neighboring Bukhara is looking for a way to dispose of its used barley,

which still retains its calories and food value. There is plenty of mash at the brewery. And how much do they write off at the vegetable bases; how much rots afterwards in the dumps where they throw the remains of processed cabbages, beets, carrots, and potatoes?

To make a long story short: all this apparently unneeded produce, costing kopeks or sometimes costing nothing at all, now constitutes 70 percent of the food ration on the hog farm. The other 30 percent is made up of vitamin enriched mixed feed.

The citizens of Kagan built their farm with their own resources, by the efforts of their own construction brigade, using turnover funds. They used discarded boards and beams. But there came a point when we felt that we were running out of or exhausting all our resources. The state came to our assistance and granted a loan of 600,000 rubles. Of course, with a guarantee of rapid repayment in cash from income accruing to the farm.

Fortunately, one of the chief advantages of hog raising is the quick return. The first 300 head of hogs were bought by Kagan citizens in the autumn of 1976; there were already 500 hogs in January of the following year and several thousand by the year's end.

Today there are almost 10,000 animals on the trade system subsidiary farm. After receiving a good profit from the sale of hogs, the Kagan workers began to improve the breed line of their stock. They bought breeding sows of the famous Ukrainian breed which produce 12 to 16 piglets per farrowing from the breeding farms in Donetskaya and Krymskaya oblasts.

The present farm by all accounts can compete with specialized farms of this type. It possesses the necessary summer and winter facilities, pasture areas, a veterinary block, a feed kitchen, and specialized buildings for farrowing and keeping young pigs of various ages.

Former workers in the dining rooms, stores, and trade system bases have gone to work on the farm. There are currently more than 30 persons on the subsidiary farm under the leadership of V. Ushakov, a veterinary doctor. They make good pay -- an average of 200 rubles; they receive bonuses along with the other categories of trade workers, and they get preference in receiving passes to holiday homes and hotels and in obtaining living quarters.

The results of the farm's work are appreciable. The number of animals has increased 12 fold in 3 years. During this time the farm for all practical purposes has not had a single case of the death or forced slaughter of an animal. Currently the daily weight gain has reached 400 grams, and the average weight of animals ready for slaughter is up to 114 kilograms. The cost of one kilogram of pork is one ruble 21 kopeks. The trade system intends to reduce this to one ruble 10 kopeks by the end of

the current five-year plan and to 80 kopeks in the future when the herd reaches 15,000 head.

Come to dine in the city's dining rooms, cafes, and restaurants. There are always four or five fresh pork dishes on the menu. Housewives can buy pork ragout, cutlets, breasts, and schnitzel in our semi-processed goods stores. Excellent pork at a list price of one ruble 95 kopeks per kilogram is sold twice a week at four large specialized stores in Kagan. The city trade system has organized the delivery of meat to invalids and veterans of the Great Patriotic War who make up a special account with us. City hospitals and kindergartens use our products.

We cannot say that the trade system has no problems. It is experiencing a shortage of transport facilities; there is no bus to take people to work and back -- you see, the farm is 6 kilometers from the city. We need arable land; the subsidiary farm would like to sow its own alfalfa, corn, barley, and feed beets nearby. We have not yet been able to mechanize the cleaning of the farm -- you see, neighboring kolkhozes are literally howling for the manure from the subsidiary farm; this is excellent fertilizer for the fields. A vacuum cleaner would solve the problem; it would free the farm workers from exhausting labor.

A good beginning makes a good ending. Today the Kagan citizens are establishing a cattle farm -- still small, it's true -- for 300 head near the hog farm. But by the end of the current five-year plan we intend to have a herd of up to 2,000 head. The trade system will have its own beef; consequently opportunities to provide the citizen's tables with a more varied and rich assortment of meat products will increase. In his speech at the November 1979 Plenum of the CPSU Central Committee Comrade L. I. Brezhnev once again pointed up the need for a very quick solution to this problem. It is worth taking time for this matter.

Commentary by O. Bogachev, chairman of the Central Committee Trade Union of Workers in the State Trade System and Consumer Cooperatives

It is an important and responsible task to achieve the uninterrupted supply of food products, including meat, to the public. This was once again underlined at the November 1979 Plenum of the CPSU Central Committee. It is necessary to use all existing resources to successfully and rapidly resolve this problem.

As everyone knows, subsidiary farms of enterprises are an important help in increasing the production of meat, milk, and vegetables. Now such farms are also being created by trade organizations. The experience of the Kagan workers who organized the feeding of hogs on food scraps showed the full advantage and efficiency of this undertaking. The Uzbek Council of Ministers has instructed the republic ministry of trade to establish hog fattening centers at all oblast public dining organizations and to devote the necessary funds to them.

Subsidiary farms of the RSFSR Ministry of Trade are successfully operating in Novosibirskaya, Omskaya, and Kirovskaya oblasts, Krasnoyarskiy Kray, and Tartariya. The Levoberezhnyy Sovkhoz of the public dining administration in Novosibirskaya Oblast increases the pace of meat production each year. The gross weight of the hogs here has doubled since 1970, and the proportion of food scraps in the hogs' diet has increased from 35 to 57 percent during this period. Improvements in the technology of feeding and maintaining the animals and the mechanization of labor intensive processes has made it possible to reduce the cost of one quintal of weight gain from 100 to 73 rubles.

This is only one of many examples. For the country as a whole hog fattening at trade organizations has been organized in seven republics so far. Last year alone these subsidiary farms produced more than 70,000 tons of pork -- almost three percent more than in 1978. This is a sizeable addition to the city dweller's table.

This year hog raising farms under trade organizations will be developed in every way possible. In the Russian Federation they will be increased by 180,000 head, and new farms will be organized under the Khar'kov, Dnepropetrovsk, and Sevastopol' trade networks. Work to establish subsidiary farms under the Kirgiz Ministry of Trade will be accelerated significantly.

Competition for the best work plan for fattening hogs on food scraps has been developed on a broad scale among workers of the subsidiary farms. Currently their proportion in the feed ration has reached an average of 50 percent in the USSR Ministry of Trade and 65 percent on a number of farms. This is a guarantee of lower meat costs.

The practice of developing subsidiary farms under trade organizations convincingly demonstrates their high efficiency and effectiveness and the significant role which they play in providing meat to the public. Therefore, the experience of the Kagan workers and other subsidiary hog-raising farms merits the widest possible application.

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SALE OF SURPLUS PRODUCE BY COOPERATIVES PROMOTED

Alma-Ata SEL'SKOYE KHOZYAYSTVO KAZAKHSTANA in Russian No 1, Jan 80 p 26

[Article by A. Kaliyev, economist of the Kazakh Ministry of Trade: "When Surpluses Are Not Surpluses"]

[Text] Cooperative organizations in Kazakhstan have purchased a total of about 220 million rubles worth of agricultural products from the public in the last 2 years. Overall the Kazakh Potreboyuz has successfully met the plan for procurement of surplus agricultural products from the public and kolkhozes. Last year alone 24,000 tons of meat (slaughter weight), 11,500 tons of potatoes, 15,000 tons of vegetables, 13,600 tons of melon crops, and many other field crop and animal husbandry products were purchased from the public.

L. I. Brezhnev, speaking at the 26th Congress of USSR Trade Unions, emphasized, "Consumer cooperatives may also render crucial assistance. In particular, it would make sense to assign them major responsibility for organizing the sale of surplus agricultural products available from the rural population and kolkhozes."

Currently procurement of agricultural products, particularly cattle from the public in Kazakhstan, is the job of the oblast special economic associations for fattening and raising cattle of the republic ministry of agriculture. Rayon and inter-rayon special associations for raising and fattening cattle on an inter-farm basis are under their jurisdiction.

In our opinion when the processes of specialization, concentration, inter-farm cooperation, and intensification operate in agricultural production, agricultural enterprises should be freed from procuring cattle from the public, and this responsibility should be turned over to consumer cooperatives. In short, it is necessary to put procurement too on a footing of specialization and concentration.

Enterprises of the oblast special economic associations consistently fail to meet plans for purchasing meat from the public. At the same time the cooperatives are increasing the volume of such procurement with each year.

By having procurement centers parallel with the procurement offices of rayon Potrebsoyuzes, oblast special economic associations cause losses, and fairly appreciable ones. Huge sums are spent; then they are made up for by government grants. Cattle purchased from the public produce a small weight gain and consume more feed to achieve it than when fattened at inter-farm facilities.

There is still another advantage in the cooperatives. The procurement offices of Kazakh Potrebsoyuz, in addition to procuring meat from the public, also purchase butter, milk and dairy products, eggs, sugar, and dried fruits from them. This increases the economic effectiveness of the procurement process. Thus, the procurement apparatus, material and technical base, transport, and other material resources of procurement are used efficiently.

The structure of procurement turnover of consumer cooperatives is typified primarily by the proportion of state procurements of surpluses of agricultural products. A low ratio of turnover in the purchase of surpluses is dependent not only on the amount of surpluses in commodity resources of agricultural products, but also on the level of work by the cooperatives in organizing the purchase and sale of these products. In oblasts, krays, and republics where the entire procurement of surpluses is concentrated in consumer cooperatives, the ratio of procurement in the system is much higher than in our republic, reaching 30 to 40 percent. The Krasnodarskiy Rayon Potrebsoyuz purchases 120 to 130 million rubles worth of various products and raw materials from the public each year. This constitutes more than 60 percent of the total volume of procurement turnover. The proportion of purchases from the public in relation to total procurement is 41 percent for cucumbers, 31 percent for onions, 88 percent for garlic, 49 percent for fruits, and 63 percent for vegetable oil.

The study of product supply from the public by rayon has been well organized in the consumer cooperative system; there is a material and technical base for procurement, storage, and processing of agricultural goods. The public profits by selling cattle to consumer cooperatives. It must be noted that a considerable portion of the products are consumed locally.

The transfer of cattle procurement to the cooperatives will facilitate an increase in the sale of meat products. Commissioned trade makes it possible to curtail the socially necessary output of labor for their distribution. Studies show that the services of consumer cooperatives in the sale of one ton of vegetable oil and also animal products save the kolkhoz 8 to 9 work days.

Sales of surplus agricultural products benefit the urban public as well; prices in urban cooperative trade are on the average 24 to 25 percent lower than the market prices. This means that by purchasing agricultural

goods in cooperative stores people in towns and workers' settlements could save more than 400 million rubles annually over the purchase prices of these same products on the kolkhoz markets.

This will facilitate better organization of animal products procurement.

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PROBLEMS WITH HERDSMEN FOR PRIVATE LIVESTOCK

Moscow SEL'SKAYA ZHIZN' in Russian 16 Mar 80 p 2

[Article by M. Zarayev: "In Search of a Herdsman"]

[Text] Every villager knows that a good herdsman is something special. He understands the nature of a cow, he makes sure that each cow is well fed and produces abundant quantities of milk, he will chase away the forest animal and he will protect crops from damage by cattle. The writer from Vologodskaya Oblast, Vasiliiy Belov describes in his sketches how herdsmen lived on northern forest pastures. He recalls the musicality of their pipes and how they were bargained with at village meetings.

I remembered these tales thousands of kilometers from the villages of Vologodskaya Oblast, in the south of Odesskaya Oblast, where in the village of Zadunayevka I met the local shepherd, Dmitriy Pavlovich Karaganchev. Everything here was different, not resembling northern Russia--the bleached, stone houses of large villages, the forestless steppe that was still being warmed by the warm October sun. Dmitriy Pavlovich offered us salted brynza [sheep's milk cheese] and new grape wine from a flask tied to his belt. He was dressed in a sheepskin jacket with fur to the outside and he had a staff in his hand. He did not at all resemble his Central Russian comrades in profession. Only one thing bound him to Belov heroes--the ancient herdsman's art, a professional attitude toward his work, a deep understanding and love of animals.

A great deal is written here about the herdsmen of public herds. This village specialty is among the respected mass specialties. But those who are entrusted with the private herd remain in the shadows, although it is difficult to overestimate the importance of this figure in village life.

In the Ryazan' Morinskiy Sovkhoz the party committee at a meeting decided to evaluate the possibilities for developing private enterprise. The question disturbed people, and this is why few came to the meeting (the question was open). Mechanic Petr Fedorovich Napalkov broached the subject that was on everyone's mind, "Feed can be taken care of. But what about the herdsman. Where will we find him? After all, turns must be taken in shepherding work."

Similar criticism was heard in many villages of the Non-Chernozem Region. It is becoming more and more difficult to find a herdsman for the private herd. Young people are not attracted to this work because it appears to have no prestige. Older people who understand the importance of such an occupation are worried about something else--they want to have a permanent length of service with a pension and paid sick leave. Here work is temporary, just through summer, and although the wages are respectable (in the Morinskiy 45 rubles per head were earned per season) what does one do during the winter? In addition it becomes increasingly difficult to graze because the land is plowed up, there is little free land and it becomes necessary to utilize useless lands, slopes and even ravines. Here cows must be watched rigorously. In other words, everyone is striving for permanent work within the collective with rights and benefits and not for temporary, even well-paid work. As a result, in some villages farmers are beginning to take turns with their private livestock. There is little good in this since people are pulled away from public labor. In addition, not everyone knows how to herd animals properly.

Is there a solution to the problem? Let us return to the experience of Zadunayevka in Odesskaya Oblast. The village is a large one with 700 households. Almost no cows are maintained here, but each household has 3-4 sheep, so that the private herd consists of 2,000 head.

The herdsmen are kolkhoz farmers. During the winter they work in various sectors of public production, usually in animal husbandry. Dmitriy Pavlovich Karaganchev, for example, works as a cowman. When the time for pasturing arrives they move to the staff of the rayon combine of everyday services without any interruption in their length of service record. The combine supplies them with special clothes, pays for sick leave and together with the kolkhoz builds camps and summer houses. The owners of the sheep pay the combine 1 ruble 30 kopecks per head per month. The herdsman receives 1 ruble of this money. Thus, the average monthly wage of Karaganchev is 300 rubles since there are 300 sheep in his flock.

The work is not easy. Animals are grazed on unfit lands, on the slopes of gullies or in the fall when the harvest is in the granaries--on stubble fields, after harvested corn, and on free melon plantations. Nevertheless there is no shortage of herdsmen in the village. Here the attitude towards this work is like that towards any other. There is no difference between those who look after the public and private herds. Both occupations are useful for people and for the state.

The same type of system is in effect in other villages of Artsizskiy Rayon, where Zadunayevka is located.

"Every year our rayon combine on everyday life," says its director Vasilii Stepanovich Polishchuk, "concludes contracts with 80 herdsmen. We feel that this service is no less important than other forms of services for the village population."

During the same year I visited Kazakhstan. Here the system for rendering the same service differed from the one found in the Ukraine. In 1974 sovkhoses, kolkhozes and other state agricultural enterprises were assigned the organization of pasturing livestock belonging to workers and employees of sovkhoses and to kolkhoz farmers. The enterprises conclude agreements with the population concerning the pasturing of private livestock, select from among their herdsmen those with the corresponding wages, supply a riding horse and the necessary equipment while viewing them as any other workers occupied in public work.

"How is the system working out?" I asked the people of the Tendykskiy Sovkhoz of Gur'yev. A great deal of livestock is maintained here--cows, sheep, camels and horses. No one complains and it occurs to no one that it is possible to pasture private livestock by taking turns. The livestock is dependably cared for.

"In three sovkhos settlements there are six herdsmen," says the director of the Tendykskiy Sovkhoz, K. B. Bergaliyev. "These are our permanent staff workers."

Recently the RSFSR decided to move in the same direction as Kazakhstan. The resolution of the CPSU Central Committee and USSR Council of Ministers, "On Private Enterprises of Kolkhoz Farmers, Workers, Employees and Other Citizens and on Collective Horticulture and Market-Gardening," allows sovkhoses and recommends to kolkhozes to support herdsmen by compensating them for expenditures for these purposes from the resources of citizens in order to aid the population in organizing the pasturing of livestock. The system of everyday services, which had performed this service to some degree, has begun to transfer it to agriculture. In the Ministry of Domestic Services to the population of the RSFSR I was shown letters of the oblast executive committees which contained requests about decreasing the service plans of oblast administrations of domestic services in connection with the transfer of services for pasturing livestock to the administration of agriculture. Such documents were received from Krasnoyarskiy Kray and Gor'kovskaya, Penzenskaya and Ryazanskaya oblasts.

Well, a great deal of time has passed and maybe this type of operation has removed the problem and now each village is supplied with a herdsman. I make local inquiries in Ryazanskaya Oblast. The deputy director of the oblast administration of domestic services, M. K. Borzunov reports, "Yes, the volume related to the pasturing of livestock is being transferred to agriculture. It is true that kolkhozes are taking this work upon themselves, but the situation is more complex with sovkhoses. They have a plan of domestic services that include the operation of bath houses, the shipment of hay and wood, the cultivation of private gardens, etc. Adding the pasturing of livestock to this means sharply increasing this plan."

In the oblast agricultural administration senior engineer A. I. Kurtsev, who is involved in domestic questions, was very careful, "Yes, the matter is not a simple one. Measures are being taken. We have given the order for

sovkhozes to fulfill the additional volume, to perform the service. But are they performing it?"

I turn to the Shatskiy Rayon Combine of Domestic Services (the Morinskiy Sovkhoz is located in this rayon). There I was given the following information, "We are curtailing the pasturing of private livestock. In 1979 these services are valued at 38,000 rubles; in 1980 they are planned for only 18,000 rubles." Maybe agriculture is still closing this expanding gap in the domestic services to village residents? The rayon agricultural administration could not answer this question and proposed that I turn to the rayon planning commission. The chairman of the commission, V. I. Zhukayev, confirmed the urgency of the problem but honestly admitted that he could say nothing about the transfer of the service to pasture livestock.

It appears that this year again the workers of Morinskiy Sovkhoz will find it difficult to pasture their livestock. Will this be the case only for them?

This type of thing always occurs when practical matters are replaced by inter-departmental arguments. In the final analysis it is not that important which staff of which organization the herdsman of the private herd belongs to, be it the combine or the kolkhoz or sovkhoz. What is most important is that the individual is not a temporary, occasional worker, but a serious professional who knows his rights and obligations as a participant in agricultural production. In Artsizskiy Rayon the domestic combine still cooperates in this work with the kolkhoz and utilizes its people. If this is so, then evidently nothing needs to be changed. And if changes are made, they should not be made only on paper but in reality as well. This must be done more rapidly! After all, it is almost time for the livestock to go out to pasture!

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WEATHER CONDITIONS AND AGROTECHNOLOGY OF SILAGE CROPS DISCUSSED

Sverdlovsk URAL'SKIYE NIVY in Russian No 8, Aug 79 pp 40-41

[Article by A. Kislov, chief of the laboratory for meadow and pasture farming of the All-Union Scientific Research Institute of the Butter and Cheese Industry, candidate of agricultural sciences: "Weather Conditions and Agrotechnology of Silage Crops"]

[Text] Silage crops occupy a leading position in the structure of the areas planted feed crops in the Southern Urals. Therefore the stability of the feed base and the successful wintering of livestock depend largely on how much silage is prepared and on its quality.

The All-Union Scientific Research Institute of the Butter and Cheese Industry has developed a scheme of a silage conveyor which provides for stable production of raw material during years that differ in terms of weather and other climatic conditions. It is recommended that this include crops that differ in their planting and harvesting times, that are well adapted to arid conditions, and that produce a high yield in the steppe zone (see table).

Table. Scheme of Silage Conveyor

Crop and strain	Approximate calendar periods	
	Planting	Harvesting
Chkalovskiy Gigant sunflowers		
mixed with Gor'kovskiy 186 peas	IV/20-V/5	VII/20-VIII/1
Chkalovskiy Gigant sunflowers	IV/20-V/5	VIII/1-VIII/10
Bukovinskiy 3 TV corn hybrid	V/10-V/25	VIII/20-IX/1
VIR-42 MV corn hybrid	V/10-V/25	IX/1-IX-10
Ranniy Yantar' Dnepropetrovskiy sorghum	V/10-V/25	IX/10-IX/20

At the end of September and in October fruits and vines of fodder melon crops, root crops and tops mixed with crushed straw of grain crops, pulse crops and perennial grasses, sunflower tops and also various byproducts from vegetable growing can be used to prepare silage.

The organization of the silage conveyor helps to conduct the planting and harvesting at times that are optimal for each crop, to avoid losses, to maneuver technical equipment more efficiently and to increase productivity and the gross yields of feeds through improving agrotechnology and conducting the entire complex of work at the best agrotechnical times.

These crops augment one another in terms of their biological peculiarities. Sunflowers require less heat. The shortest period for planting and germination was observed for them with an average daily temperature of 17.3 degrees -- 6 days; for corn with 19.2 degrees -- 8 days; and sorghum with 18.4-19.1 degrees -- 10 days. Incidentally, with an average daily air temperature of 17.3 degrees the corn germinated in only 14 days and the sorghum, in 12 days.

In order to reach silage ripeness, Chlakovskiy Gigant sunflowers require 80-100 days from planting to complete blossoming, with a sum of heat of 1,600-1,650 degrees; VIR-42 corn and Ranniy Yantar' Dnepropetrovskiy sorghum -- from planting to milky-waxy ripeness, 100-110 and 110-120 days, respectively, with sums of heat of 1,950-2,100 and 2,050-2,250 degrees. The Bukovinskiy 3 TV hybrid reaches milky-waxy ripeness in 80-100 days after planting with a sum of heat during this period of 1,800-2,000 degrees.

Sunflowers alone and mixed with peas best utilize preplanting supplies of water in the soil when they are planted early. Losses of moisture from the soil through evaporation during the period from the planting of sunflowers (third 10-day period in April) until the planting of corn (second 10-day period in May) reach 40 millimeters, or 400 tons from each hectare.

Two-thirds of the yield of dry substance from sunflowers is accumulated during July and therefore it is also important for it to have precipitation during the first half of the summer in addition to preplanting supplies of moisture. Most of the yield of corn is formed in the second half of the growing period: for the Bukovinskiy 3 TV hybrid -- 52 percent of the overall accumulation of dry substance takes place in August; for the VIR-42 hybrid -- 70 percent of the dry substance is formed in August and the first 10 days of September; and, finally, 82 percent of the yield of sorghum grows during August and the first two 10-day periods of September. Therefore weather conditions in August and September are especially important for corn and sorghum.

Sunflowers alone and mixed with peas had the highest growth rates of the leafy surface and yields of green and dry mass. By the beginning of July the average amount of leafy surface of areas planted in them during 1973-1974 amounted to 13,000 square meters per hectare (64 percent of the maximum); for corn -- about 8,000 square meters per hectare; and sorghum -- only 2,000 square meters per hectare. Corn caught up with sunflowers in terms of the leafy surface by the end of July and sorghum, by the end of August. Therefore they were also behind in the rates of growth of the yield, 90-95 percent of which, as we know, is formed in the leaves during the process of photosynthesis.

By the end of July the yield of dry substance in the sunflower crop amounted to 32 percent of the maximum; VIR-92 corn -- 9 percent; Bukovinakiy 3 -- 10 percent; and sorghum -- 3 percent. And by the beginning of August (the stage of blossoming of sunflowers and tasseling of corn and sorghum) -- 100, 30, 38, and 17.7 percent, respectively. And, after all, it is frequently at the beginning of August, in the stage of tasseling, that they begin harvesting corn for silage and so they fail to harvest 60-70 percent of the yield. Therefore it is more advantageous to cultivate sunflowers and sunflowers mixed with peas for early harvesting.

It should be noted that corn and sorghum, which are distinguished by a longer growing period, have the greatest photosynthetic capacity of the planted areas and, consequently, a greater potential for forming a large yield than crops that are harvested early. But the amount of the yield depends finally not on the potential of the crop, but on the weather and other climatic conditions and the extent to which they correspond to biological peculiarities.

According to our observations, if there has been a drought during the entire growing period (1975) or during July and August (1972 and 1978) and the crop was formed from preplanting supplies of moisture and precipitation that came during the first half of the summer, sunflowers have been more productive. When there is dry weather in August alone and uniform distribution of precipitation during the preceding period, the productivity of corn, sunflowers and sorghum were identical (1971). With uniform distribution of precipitation throughout the entire summer (1973, 1974, 1976), maximum productivity was provided by the VIR-42 and Bukovinskiy 3 corn hybrids.

Sorghum also places great demands on temperature conditions throughout the growing period and especially during the final period of growth in September. The great advantage of sorghum over corn was revealed in 1976 when the areas planted in it were subjected to slight frosts as early as the end of August (minus 2-3 degrees), when sorghum successfully withstood them and, continuing to grow until the end of September, surpassed corn in terms of the overall volume of dry substance by 25 percent. Sorghum withstands intensive drought better because of its capability of maintaining its growth until more favorable conditions return and because of its economical utilization of existing moisture resources. This was manifested in 1977 when the corn with filled in ears had to be harvested at the beginning of August while sorghum was harvested at its usual times. Sorghum produced approximately 20 percent more dry substance than corn did.

A knowledge of the biological peculiarities of the crops makes it possible to adapt better to existing weather conditions through maneuvering the various parts of the silage conveyor.

Preference should be given to sunflowers and mixtures that include sunflowers when preplanting supplies of moisture are good. Then good results are produced not only by areas planted in sunflowers mixed with peas, but

also when they are planted alone in every other row or in every row with a planting norm of 15-25 kilograms per hectare (0.25-0.35 million germinative seeds per hectare), and also when sunflower are planted with corn during the first interrow cultivation. This device can be carried out with fertilizer spreading attachments to a KRN-4.2 cultivator. This made it possible to increase the yield of green mass on the Kolkhoz imeni K. Marks in Buguruslanskiy Rayon by 64 quintals per hectare in 1977.

Dense plantings of sunflowers alone, in addition to increasing the yield of green mass and dry substance (in 1973 and 1975, by an average of 13 and 23.3 percent, respectively), improve the silage-intensiveness and reduce losses of nutritive substances during the process of preparing silage since the moisture content of the raw material is 2.5-3 percent lower than with ordinary wide-row planting, the cutting is less coarse, the mass of silage packs better, and losses of nutritive substances because of lost juices and oxidation processes are reduced.

But when there is good moisture retention in the soil, the most effective agrotechnical device is to plant sunflowers in combination with peas. Sunflowers are planted in every other row (with an interrow of 30 centimeters) and in every row in an amount of 15 kilograms per hectare (0.25 million germinative seeds per hectare), and peas are planted crosswise to the sunflowers in every other row in an amount of 90 kilograms per hectare (0.45 million germinative seeds per hectare). In 1976 with this kind of agrotechnology on the Pokrovskiy Sovkhoz-Tekhnikum the mixture produced a yield of green mass of 430 quintals per hectare. Moreover the silage from the sunflower and pea mixture has the highest nutritive properties: 100 kilograms contain 25.4 feed units and 2.2 kilograms of digestible protein; each feed unit has 90 grams of digenitive protein, 22.4 grams of calcium and 50 milligrams of carotin.

In the next few years it will be necessary to refrain completely from planting oil-bearing strains of sunflowers for feed purposes since they produce 45 percent less green mass than the Chlakovskiy Gigant sunflowers and 63 percent less dry substance.

During years with ordinary and insufficient amounts of moisture, approximately two-thirds of the area planted in silage crops should be planted in the VIR-42 and Bukovinskiy 3 corn hybrids, augmenting them with sorghum in the southern regions of the zone which have more heat.

While the technology for the cultivation of corn is well known, the reason for the small yields of sorghum is frequently the failure to observe agrotechnical requirements for this crop, which are sufficiently high, especially with respect to weediness. Therefore, when cultivating sorghum special attention should be devoted to planting it on clean fields, preparing the soil well, planting and caring for the areas carefully, and applying herbicides.

The introduction of a silage conveyor on each farm is one of the efficient means of further advancing the science of farming and the agrotechnology of cultivating silage crops.

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FULLER UTILIZATION OF CLIMATIC RESOURCES URGED

Sverdlovsk URAL'SKIYE NIVY in Russian No 9, Sep 79 p 23

[Article by Yu. Zhilin, senior scientific worker of the Ishimakaya Experimental Station for Farming, and A. Dudko, chief of the seed growing division: "Utilizing Climatic Resources More Fully"]

[Text] With sufficient moisture the most significant influence on the productivity of areas planted in agricultural crops is exerted by photosynthetically active radiation (FAR) and the air temperature. An increase in the temperature contributes to an increase in the biomass only up to a certain point (for spring wheat -- 25-30 degrees), while an increase in the utilization of FAR by the planted areas has a favorable effect under any combination of agrometeorological conditions that are favorable for the growth and development of the plants.

Areas planted in commercial spring wheat in the forest steppe zone of Tyumenskaya Oblast assimilate 0.5-1 percent of the photosynthetically active radiation, which corresponds to 10-25 quintals of grain per hectare. The efficiency factor of photosynthesis can be significantly increased by forming a structure of the planted areas whereby the plants can utilize more fully in their development both resources of light and heat, and resources of moisture. This can be achieved by the appropriate density of the plant stand and optimal planting norms, planting times and depth of placement of the seeds.

Our research shows that the optimal planting norm for regionalized strains of spring wheat in moist years is 6-7 million germinative seeds per hectare (depth of placement -- 5 centimeters). In normal and dry years the planting norm for Saratovskaya 29 and Grekum 114 is 4-5 million, and Novosibirskaya-67 -- 6 million germinative seeds per hectare (depth of placement in dry years -- 6-7 centimeters). The planting of 6 million seeds in a year with conditions that are close to the average for many years corresponds to a density of the plant stand of 450-500 plants per square meter and to a yield of 35-40 quintals per hectare after grain predecessors.

In the heading stage with this plant stand the optimal assimilation area of the leaves is formed which, under moisture conditions that are close to the average for many years, reaches 12,000-25,000 square meters per 1 hectare. The photosynthetic potential during this time is 300,000-400,000 square meters per day on a nutrition background of $N_{120}P_{180}K_{90}$.

With a planting norm of 8 million germinative seeds per hectare the density of the plant stand and the area of the leafy surface are greater, but the productivity decreases even with a better fertilized background because of the competition of the plants for moisture, which takes on the role of a primary minimum.

One of the most important conditions for obtaining large yields is economical and efficient utilization of precipitation during the growing period, particularly June and July when the spring wheat goes through the stages of tillering, stem extension, heading and blossoming.

The analysis we made of the productivity of spring wheat on strain testing sections of the oblast during the past 40 years (1938-1977) as well as the observations of the Tyumenskaya Hydrometeorological Observatory show that when there is a shortage of moisture in June and a normal amount or an excess in July, late planting times are more justified -- in the third 10-day period of May. Conversely, if there is much precipitation in June and not in July, the optimal time comes in the first 10-day period of May. During normal years the greatest coefficient of the assimilation of FAR and, consequently, the highest productivity are found for medium ripening strains of spring wheat (Saratovskaya 29, Grekum 114, Novosibirskaya 67, Rang) when they are planted in the second and the beginning of the third 10-day periods of May; and for medium-early strains (Lyutetsens 62, Skala) -- in the fourth 5-day period of May.

The efficiency factor of photosynthesis in commercial crops of spring wheat can be increased by the narrow-row and cross-sowing methods of planting, when the productivity also increases as a result of reduced weediness. Spring wheat plants then utilize the soil moisture uniformly and more completely.

Still, it should be noted that there are certain optimums of moisture for strains that ripen at various speeds. Our analysis of the statistical dependency of the productivity of ecotypes of strains of spring wheat at strain testing stations on the precipitation during the growing period made it possible to reveal the approximate limits of these optimums. For medium early strains, the optimal quantity of precipitation from planting until waxy ripeness is 150-170 millimeters (with other weather conditions being close to the norm). The average productivity of Lyutetsens 62 (30.7 quintals per hectare) and the greatest (40-50 quintals per hectare) -- FAR -- 2-2.5 percent-- corresponded to this quantity of precipitation during the period of 1938-1972. For medium ripening strains of spring wheat the optimal quantity of precipitation during the growing period is 160-180 millimeters. The average productivity of Saratovskaya 29 in 1956-1974 was

distinguished by its stability with this amount of precipitation and was within the range of 35-40 quintals per hectare. The greatest yield was obtained in 1972 at the Berdyuzhskaya strain testing station, where Novosibirskaya 67 and Grekum 114, which are resistant to lodging, produced 54.7 and 56.9 quintals per hectare when planted on fallow on 19-20 May, which corresponds to an assimilation of FAR of up to 2.5 percent.

The late ripening strain Mil'turum 553 produced the greatest average yield during the period of 1939-1972: 29.6 quintals per hectare. The amount of precipitation during the growing period was 170-200 millimeters. The productivity of this strain is unstable (from 20 to 40 quintals per hectare).

When comparing the productivity of strains with an optimal quantity of precipitation one can note that the coefficient of the assimilation of FAR by the planted areas of medium-early and late ripening strains amounted to an average of 1.25 percent during a period of many years, while areas planted in a medium ripening strain assimilated 1.5 percent, with a maximum of 2.5 percent.

Consequently, one of the indispensable conditions for increasing the yields of spring wheat in our zone is preferential cultivation of medium ripening strains whose biological productivity is higher than that of medium-early and late ripening strains under any moisture conditions.

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TILLING AND CROPPING TECHNOLOGY

PREVENTING CHLOROSIS, RATIONAL USE OF FERTILIZERS

Kishinev SOVETSKAYA MOLDAVIYA in Russian No 2, Feb 80 pp 32-33

[Article by Ye. Serzhentu, S. Andriyesh and V. Teyanok: "Phosphoric Fertilizers and Chlorosis in Corn"]

[Text] The idea has been firmly established among farm workers in the field that fertilizers always increase the harvest, and that the more of them applied, the better. In fairness, this was in the time when low dosages of fertilizers were applied, when, in crop rotation, there were not sufficient quantities of them for all crops.

With the increase in the quantity of applied fertilizers, there appeared many reports concerning the fact that in calcareous, common, and southern chernozems, under the systematic use of high doses of phosphoric fertilizers, over-phosphatization, and even excessive phosphatization, of the soil is occurring. Under these conditions, the effectiveness of freshly applied fertilizers is reduced and various plant diseases appear; for example, chlorosis of corn, peas and grape vines, and rosette disease in fruit orchards--all of which sharply reduce yields at harvest.

In our republic, chlorosis is encountered on farms in Kriulyanskiy, Rybnitskiy, Leovski, Chadyr-Lungskiy, Karyl'skiy and a number of other rayons. According to data of the Institute of Corn and Sorghum, in 1977, in Leovski Rayon alone, the area of corn affected by this disease totaled more than 2,500 hectares.

The external indication of affected corn plants is a light yellow coloration of the leaves in the early stages of leaf development (this indication is sometimes taken as a sign of nitrogen deficiency in the soil). In the six to eight leaf stage, the major part of the leaf surface remains yellow as before, while its edges and a narrow area along the central vein begin to turn green. By the arrival of the tasseling stage, the major part of the yellow leaf areas takes on a reddish hue, or it dies. With the plants under heavy stress, the reddish hue of the leaf surfaces begins at the three to five leaf stage. In Krasnodarskiy Kray, this disease is appropriately referred to by the populace as red rot.

The affected plants are markedly stunted in growth; they form soft cobs, or with greater severity of the disease, they form virtually none at all. Individual plants, whole parcels--up to 50-70 percent of the planted area, or an entire crop may be afflicted.

Although the causes of chlorosis have not as yet been definitely determined, it is nonetheless difficult not to concur with investigators who connect its appearance with high phosphorus content of the soil and with the application of inordinate amounts of phosphoric fertilizers, as well as with the effect of active carbonates and the pH of the soil solution.

With the cooperation of the personnel of the Southern Zonal Agrochemical Laboratory, we examined a number of large corn plantations and took soil samples for analysis. It was ascertained that in parcels containing a normal amount of corn, 100 grams of soil held from 1.2 to 2.3 milligrams of P_2O_5 . In diseased stands, free phosphorus levels ranged from 3 to 4.67 milligrams, and in seriously afflicted plantings, up to 11.5 milligrams per 100 grams of soil.

Thus, under the conditions prevailing in our republic, chlorosis of corn on common and on calcareous chernozems occurs in those instances where the quantity of free phosphorus approaches 3-3.5 milligrams per 100 grams of soil (according to the Machigin method). If one proceeds from the fact that unfertilized calcareous chernozems contain from 1-1.2 milligrams generally, while P_{100} (5 quintals per hectare of superphosphate) adds to this 0.6-0.7 milligrams, then $P_{300-400}$ should be considered the dosage at which on these soils the critical point with respect to corn crops is reached, and for parcels which have been previously fertilized-- P_{200} . The crux of the matter lies in the problem whereby that portion of phosphoric fertilizer which was not utilized by the plants during the year in which it was applied is not fully bound up by the soil into inaccessible compounds. Thus, with the yearly application of fertilizers, phosphorus accumulates in the soil. This, of course, is desirable, but, as we already know, only up to a specific limit, which may be exceeded if it is not perceived in time.

Currently, supplies of mineral fertilizers in the republic are increasing and the danger represented by the growing manifestation of their harmful effect is increasing. Primarily this concerns experiment farms, sovkhos-technical schools, farms of the Moldavian fruit and vegetable growers' association and the Moldavian viniculturists' association, and seed producers--all those who have access to means of application of high dosages of phosphoric fertilizers. Attention must be directed to this aspect of the problem also during the cultivation of corn by new industrial techniques.

The critical limits established for free phosphorus allow us to regulate its accumulation in the soil, in order to prevent the incidence of disease in places where it has not as yet been observed.

Chlorosis is a consequence, not of intensive chemical application, but of the non-systematic use of high dosages of phosphoric fertilizers. That is why it is so important to apply fertilizers according to well-conceived plans based on scientific principles of fertilizer usage which take into account all of the essential factors: provision of nutrients to meet the biological needs of plants, genetic characteristics and agrochemical soil indicators, the preceding crop, its fertilization, and a number of others. The Kishinev affiliate of TsINAO [Central Institute for Agrochemical Assistance to Agriculture], in conjunction with zonal agrochemical laboratories, is developing such plans with the use of computers and economic-mathematical methods. This operation takes into consideration about 15 factors.

For the 1980 harvest, 696 kolkhozes, sovkhozes and interfarm associations of the republic are making use of computer-derived plans for fertilizer use. It is the duty of all agricultural personnel in those places to strive to carry them out with precision. The application of fertilizers according to these plans will increase the efficiency with which they are used, forestall the deleterious effect of fertilizers on soil fertility and the harvesting of agricultural crops, and will help to prevent pollution of the environment.

Wherever phosphoric fertilizers are employed in large quantities, it is advisable to conduct operational agrochemical soil surveys every 2 to 3 years.

In the event that the manifestations of chlorosis are noted in corn crops, the zonal agrochemical laboratory should be requested to provide an operational analysis of soil from the affected field. Upon detection of a high phosphorus content in the soil, it is essential to refrain from the application of phosphoric fertilizers and to subsequently sow crops in this field which have a less negative reaction to excessive phosphatization of the soil (legume-grain mixtures, sunflowers, barley). Should the recommended replacement, for whatever reasons, turn out to be unworkable, it will be necessary to apply at plowing time--calculated per hectare--60 to 80 tons of organic fertilizers, or 6 to 10 kilograms (by active ingredient) of zinc fertilizers. The latter may be employed at the presowing cultivation.

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TILLING AND CROPPING TECHNOLOGY

EFFECT OF SOWING DATES, TILLAGE MODES ON SPRING WHEAT YIELDS

Sverdlovsk URAL'SKIYE NIVY in Russian No 4, Apr 80 pp 24-25

[Article by V. Semenov, director of Sovetskiy Sovkhoz in Orenburgskaya Oblast and candidate in agricultural sciences]

[Text] Early sowing dates have been set for spring grain crops, especially spring wheat, in Orenburgskaya Oblast and all the Urals areas. These recommendations were based on experiments of scientists and farmers on the basic method of moldboard tillage. The soil-protection system has been widely distributed in the last few years. As we know, sweep tillage reliably protects the soil from wind erosion and increases the accumulation of moisture in the soil and, ultimately, the productivity of the crops.

The soil protection system of tillage for the Orenburg area is a progressive system, especially for steppe areas, but its introduction is held up by lack of information. Fears are expressed that sweep tillage will be ineffective because of the early sowing dates and the greater weediness of the fields.

We undertook the task of studying the effect of tillage methods at the dates of sowing spring wheat. The experiment was performed annually, starting in 1973, in the Sovetskiy Sovkhoz in Akbulakskiy Rayon.

The sovkhos' land holding is in the dry-steppe area of southern Orenburgskaya Oblast, where the average annual precipitations amount to 273 mm, 99 mm in the cold season (October-March) and 165 mm in the warm season (April-September). Humidity of 30 percent and less is observed for about 57 days. The average annual air temperature is +3.9°. The absolute minimum is -42° and the maximum is +45°. The frostfree season lasts 145-150 days.

The experiment was repeated 4 times on an area of 900 square meters (6 x 150) on plots located in a single row.

The volume and distribution of the precipitations in the years observed differed considerably from the average figures for several years. During the growing season of 1973 (April-June), 210 mm fell instead of the normal 99 mm,

while 34.1 mm fell in 1975 and 52.33 mm in 1979. There were no precipitations at all in April and May of 1979.

In the experiment, 3.2 million germinating seeds of Saratovskaya 210 spring wheat were sown per hectare. Plots tilled by different basic methods were sown with SZS-2.1 seeders. The preceding crop was spring wheat, the third crop after a fallow.

Meanwhile observations were made of the moisture of a 1-meter layer of soil before sowing and in the stage of ear formation, and of the weediness of the field before each sowing date and before harvesting. The number of productive stalks was determined, as well as their grain content per ear, the weight of 1,000 grains and the productivity. Production checks of the sowing dates were made in addition to the experiment on the small plots.

We found the moisture content higher for all sowing dates, especially before sowing, in the case of sweep tillage than in that of moldboard tillage, and this difference was greater in the dry years. In 1973, 1975, 1977 and 1978 there was 82, 64, 68 and 50 percent more moisture before sowing in the case of sweep tillage, and in 1976 and 1979 the difference decreased to 28 and 19 percent. Moreover, the summer rains sometimes evened up the difference in moisture of the top layer of soil (0-10 cm). On the 7-year average before sowing the advantage of sweep tillage over moldboard tillage came to 22.3 mm of productive moisture. This was also observed in the stage of ear formation.

As for the sowing dates, in 1975, 1977 and 1979 the early sowings grew under the best conditions of the water regime because of the very small volume of summer precipitations. But in 1973, 1974, 1976 and 1978 considerably more precipitations than normal fell in summer. The early sowings were better supplied with moisture in the tube formation-ear formation and ear formation-ripening stages and the late ones in the tillering-tube formation stage.

The wild oat is the predominant weed in the sowings. The observations indicated that late sowing dates are an effective means of combatting this pest. The later the sowing date the lower the level of infestation with wild oats. This rule held true over the 7 years of observations for both moldboard and sweep tillage. When sowing was done on the last days of April the average density of wild oats over the years considered was reduced by almost 4 times. Sowing dates in May minimized the infestation of the crops with wild oats. Other kinds of weeds were no more than 5-6 percent of the wild oats. The basic tillage method had no essential effect on the general weediness of the crops or their infestation with wild oats, although there is an evident trend toward greater destruction of wild oats in the case of sweep tillage. This is because in the latter case the seeds of the weed are located in the top layer of the soil and grow faster and more fully, so that they are more subject to destruction by presowing processing.

Analysis of the structure of the yield showed that the supply of moisture in the soil and the purity of the crops are the main factors for better growth of the wheat (See table).

In the case of sweep tillage we noted a greater fullness of the shoots, a greater number of productive stalks, and more grain content per ear than in the case of moldboard tillage at later sowing dates. In 1973, 1975 and 1977 these dates were between 30 April and 5 May, and in 1974 and 1976 they were between 5 and 10 May.

The fullness of the shoots and the number of productive stalks for harvesting were greater with earlier dates (from 25 to 30 April) in moldboard tillage in 1973, 1975 and 1977, but with later dates (from 30 April to 5 May) in 1974 and 1976.

Effect of Sowing Date and Tillage Method on Structure of Average Spring Wheat Yield in 1973-1977

1 Способ обработки	2 Сроки сева							3 Среднее по годам
	20/IV	25/IV	30/IV	5/V	10/V	15/V	20/V	
4 5 Число продуктивных стеблей, шт./м²								
Отвальная	176	181	210	201	176	139	109	170
Плоскорезная . . .	124	155	207	222	210	161	129	174
6 Число зерен в колосе, шт.								
Отвальная	11,6	12,3	14,1	12,1	11,5	11,2	8,8	11,7
Плоскорезная . . .	12,7	12,2	15,8	14,9	12,6	12,7	10,6	13,3
7 Вес 1000 зерен, г								
Отвальная	23,4	24,7	27,9	30,1	30,6	29,5	31,1	28,2
Плоскорезная . . .	22,8	24,8	29,9	32,2	30,6	30,8	32,0	29,0
8 Урожайность, ц/га								
Отвальная	4,8	5,5	8,3	7,3	6,2	4,6	3,0	5,6
Плоскорезная . . .	3,6	5,0	9,6	10,7	8,1	6,3	4,4	6,8

1. Method of tillage
2. Sowing dates
3. Average for dates
4. Moldboard tillage
Sweep tillage

5. Number of productive stalks per square meter
6. Number of grains per ear
7. Weight of 1,000 grains in grams
8. Productivity in centners per hectare

The considerable advantage of sweep tillage over moldboard tillage in the number of productive stalks is evident at all sowing dates in all the years considered. An analogous regularity is to be seen in the case of grain content per ear.

As the observations showed, the grain content per ear of spring wheat increases from the early sowing dates to the late ones and reaches its maximum from 25 to 30 April in the dry years and from 30 April to 5 May in the rainy ones. A direct correlation is observed between grain content per ear and number of productive stalks. The sowing dates and basic tillage methods had a greater

effect on this indicator in the dry years. In 1975 and 1977 the grain content per ear decreased very sharply in the May sowings as of 5 May in the case of moldboard tillage and as of 10 May in the case of sweep tillage. In the case of the late sowing date (15 May) the number of grains per ear was 2.1 times less than in that of the early one (25 April) in 1975, and 2.5 times less in 1977. In the rainy years (1974 and 1976) the precipitations during the period of ear formation favorably affected the late sowings, which was also the reason for the increase in the number of grains per ear from the early to the later sowing dates.

Comparison of the grain content per ear in the years differing in moisture shows no great difference between them in the early sowings, while in the late ones the grain content per ear was 2-2.5 times greater in the rainy years than in the dry ones. The average level of this indicator is considerably higher in the rainy years.

The weight of 1,000 grains fluctuates less than the grain content per ear. It is considerably affected by both the weather conditions and the tillage methods and sowing dates. In the dry years the weight of 1,000 grains diminished in the May sowings, but in the more rainy years the later sowing dates raised this indicator by 2.5-5.1 grams. Sweep tillage resulted in bigger grains than moldboard tillage.

Under production conditions, a check of the sowing dates in all years under consideration confirmed the data from the experiments on the small plots. A great increase in the yield was noted in the case of later sowing dates on fields heavily infested with wild oats.

Accordingly the grain yield of wheat with various sowing dates is mainly affected by the precipitations and their distribution throughout the vegetation period. Early sowings have the advantage in case of insufficient moisture in summer, and late ones do in case of a surplus. Early sowing dates provide more stable grain yields in the case of moldboard tillage (25-30 April), and late ones (5 May) provide higher grain yields in the case of sweep tillage. Sweep tillage results in higher yields of spring wheat than moldboard tillage does in the case of all sowing dates except the earliest.

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BIOPREPARATIONS IN COMBATING ROOT ROT IN SPRING WHEAT

Sverdlovsk URAL'SKIYE NIVY in Russian No 4, Apr 80 p 26

[Article by Z. Gaymullina, scientific associate of the Ural Branch of VNIIG]

[Text] Protection of plants from harmful organisms is a factor for securing stable planned yields and high-quality output.

According to the figures of VIZR [All-Union Institute for Plant Protection] and VNIIESKh [All-Union Scientific Research Institute of Agricultural Economics], the effect of plant protection measures amounted to 24.7 billion rubles in the Eighth Five-Year Plan and 28.7 billion rubles in the Ninth Five-Year Plan.

An important part in the present plant protection strategy is played by the biological method, which is less dangerous to the environment. Its development as the most important component of the integrated system of plant protection was provided in the decisions of the 24th and 25th CPSU congresses. The volumes of use of biological means increased from 2 million hectares in 1968 to 13.7 million hectares in 1977 (I. A. Churayev, 1977; Yu. N. Fadeyev, 1979).

To meet the practical requirements, the Plant Protection Department of the Perm' SKhI [Agricultural Institute] studied the effectiveness of dusting seeds before sowing with biopreparations (trichothecin, FEM [phytobacteriomycin] and polyoxyn) in 1971-1976. They have been used to combat root rot in spring wheat, which is one of the more widespread diseases in Permskaya Oblast and causes considerable losses in harvests. According to the figures of the Permskaya Oblast Plant Protection Station, the losses in grain yields of spring wheat varied from 0.2 to 17 percent (1970) depending on the soil preparation. In our field studies the damage coefficient amounted to 17.2-17.5 percent and the harvesting losses came to 13.1-15 percent.

It was determined that root rot in spring wheat in the Kama region is caused by a complex of fungi, chiefly Helminthosporium and Rosa Fusarium.

The method of presowing processing of seeds with dusts of biopreparations was used to eliminate seed infection and to protect the sprouts from soil infection. The field studies were made on an experimental field and on the fields of the Perm' SKhI training farm and of the Bol'shevik Sovkhoz of Permskiy Rayon. Production experiments were instituted, as well as small-field and small-plot ones under production conditions. Seeds were processed by the dry method for 2 days before sowing. The optimal dosage of the biopreparations was determined by laboratory studies: 1 percent trichothecin dust and 5 percent FBM dust, and 3 and 10 percent polyoxyn dust for 2 grams per kg of seeds. The infection background is the natural one. The article presents the results of the studies under production conditions on an area of 100 square meters and 1 hectare under observation.

The experiments showed that processing the seeds with biopreparations stimulates the fullness of the shoots, which was 2.6-10.4 percent greater than the control in the small-plot experiment and, with the exception of the variant with FBM, 3.5-9.2 percent greater in the production experiment. Use of trichothecin dust considerably intensified the germination of the seeds.

In the experiment with presowing dusting of seeds the effectiveness of the biopreparations was also evaluated according to the development of the root rot plant disease. The degree of development of the disease in the experimental variants (small-plot experiment) was 2.3-7 percent in the tillering stage and 10.3-16 percent in the stage of ripening latex and wax, or 5.7-1.9 and 2.8-1.8 times less than the control in the respective stages.

In the production experiment the plants raised from seeds processed with the biopreparations were infected with root rot 2.9-3.6 times less in the tillering stage and 1.6-1.3 times less in the stage of ripening latex and wax than the control plants. Besides considerably curtailing development of the disease, the biopreparations helped to increase the grain yield of the spring wheat. In the small-plot experiment, considerable increments of grain were obtained from variants treated with trichothecin and polyoxyn dusts.

In the production experiment on the fields of the Perm' SKhI's training farm the additional yield obtained from seeds dusted with biopreparations amounted to 12-20.3 percent, and the variant treated with trichothecin produced the highest yield, reaching 35 quintals per hectare. The use of polyoxyn proved somewhat less effective, but both preparations increased the yield by 6.4 and 2.4 percent respectively over the standard (50 percent TMTD [tetramethylthiuram disulfide] dust). The effectiveness of the FBM biopreparation was equal to that of the standard.

Calculation of the economic effectiveness indicated that all outlays on use of the biopreparations are justified.

In conclusion it may be said that presowing application of biopreparations, with a standard expenditure of trichothecin and FBM dusts of 3 grams per kg of seeds and one of polyoxyn dust of 2 grams per kg of seeds, is of great practical importance in combatting root rot in spring wheat. Replacement of

toxic chemicals with biopreparations in disinfecting seeds is highly advantageous because the harmful effect upon workers and the environment is reduced and noteworthy results are obtained in lowering the disease rate and increasing the yield without impairing its quality: Development of the disease is reduced by 1.6-5.7 times, and the grain yield is increased by 2.4-3.6 quintals per hectare.

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TILLING AND CROPPING TECHNOLOGY

GRAIN CROP DEVELOPMENT IN ROSTOVSKAYA OBLAST

Moscow PRAVDA in Russian 4 May 80 pp 1-2

[Article by PRAVDA special correspondents M. Kryukov and I. Totskiy, Rostovskaya Oblast: "Whose Spikes Are More Bountiful?"]

[Excerpts] The fields of grain on the Don steppes are enormous. Machine operators have already dressed the winter crops in large areas and more than 900,000 hectares have been sown to spike and pulse seed crops. Many farms have begun sowing sunflowers and corn.

In the final year of the five-year plan farmers in Rostovskaya Oblast intended to obtain at least 9 million tons of grain. The time and labor of these farmers, the knowledge of specialists and scientists, and the organizational abilities of rural Communists were devoted to the struggle for a high, stable harvest.

Those that initiated the competition themselves are setting a good example. Farmers in Azovskiy Rayon during the Tenth Five-Year Plan obtained an average yield of from 26 to 30 quintals and they increased the average annual production of grain by 30,000 tons and procurement of grain by 20 percent.

Many Don farms and rayons are capable of operating with good results, they achieve stable harvests year after year, and the mastery of the farmers and knowledge and experience of specialists fight drought. The basis for the success is the high farming culture and accomplishment of all agricultural methods as a complex. But, along with the progressives, separated only by a strip of forest or a settlement road one finds kolkhozes and sovkhozes which lag behind significantly from their neighbors and gather low harvests of grain crops. But overall throughout the oblast, as analysis shows, the yield level brings to mind a clock pendulum. Thus, in 1975 Don farms on the average per hectare got 18 quintals of grain, 21.3 quintals in 1976, 18.6 in 1977, 25.5 in 1978, and only 10.6 quintals last year. There need be no mention of guaranteed production of grain yet. It has been noted that over the past 9 years the difference between the maximum and very lowest yields was 15 quintals per hectare.

This did not go unnoticed and was not overlooked by agronomists, economists, scientists, party, and economic workers. Notes of alarm were expressed in their speeches at meetings and at scientific practical conferences. Their conclusion is that the instability in the Oblast's grain economy is caused by a multitude of reasons. Objective and subjective reasons.

Of course, one can never avoid unfavorable climatic conditions and dry winds. But, it is possible and necessary to avoid individual changes in the structure of the sown areas on many kolkhozes and sovkhozes which does not permit the mastery of rational seed fallow row-crop rotations and violations of farming practices and working periods.

Often even during the autumn period the sowing is done by "happenstance." They plant the seed after a poor predecessor in dry soil. They do not rely on good seeds, but the plan for sown areas is "up to snuff." But wouldn't it be better for workers in the oblast planning and agricultural organs to ask experienced farmers for advice on how to do better?

"They send the plan down to us," said A. Bgdikyan, chairman of Pravda Kolkhoz, Yegorlykakiy Rayon. "Plant! So we plant. Last autumn, for example, 3,300 hectares were planted to winter crops, and during the spring we replanted approximately 600. Who needs that? They wasted the grain for nothing although they knew that the sowings would not support the winter crop. They sowed them to spike crops for the third or fourth year running. In farming it's a sin to deceive yourself but even more so to deceive the land."

No matter who we spoke with--scientists, specialists, party workers--they all were of the same opinion: for the dry Don steppe pure fallow land is the fundamental and obligatory element of field crop rotation. They supported their arguments with convincing examples quoting from last year when it was dry. The heartless heat then literally singed the sowing. But at the same time the harvest from the fields in Zernogradskiy and Sal'skiy rayons sent grain to the state storehouse. Does this mean that they escaped the drought?

"Not a drop of rain for three months," relates I. Nazarov, first secretary of the Zernogradskiy party raykom. "We rescued the winter crops sowed in well-worked and fertilized fallow lands. And they provided grain. We realized before that you don't get a high stable harvest in the dry zone without fallow lands. We requested that the agronomists from the farms seek out ways to permit a reduction in the area of low-productivity crops and expand the fallow fields. They facilitate accumulation of moisture, destroy pests and weeds, and in the autumn you get good seedlings. In 1978, for example, we averaged 49.8 quintals of grain per hectare from sowings of winter wheat displaced over fallow fields encompassing an area of 32,000 hectares."

"In order to achieve stable harvests and fully utilize the potential capabilities of new types of wheat," said I. Kalinenko, corresponding member of the VASKHNIL [All-Union Academy of Agricultural Sciences imeni V. I. Lenin], "it was necessary for the oblast's farms to have a great deal of fallow land. This makes it possible to significantly increase the annual guaranteed wheat crop."

Expanding fallow fields is only a portion of the problem. First, fallow land is only one of the elements of the farming system which ensures a stable harvest. Second, they must be maintained in model fashion. However, this sometimes does not happen. Fallow lands are not economically looked upon everywhere. For example, 35,000 hectares put to fallow land since autumn of last year on the farms in Zavetinskiy, Bokovski, Kasharskiy, Dubovski, and Konstantinovskiy rayons remain unplowed. Individual sections of fallow land at Primorskiy Sovkhoz in Azovski Rayon, at Sovkhoz imeni Voroshilova and Moskovskiy Sovkhoz in Tselinskiy Rayon, and Krasnyy chaban Sovkhoz in Zimovnikovskiy Rayon are so overgrown with weeds that they must be replowed. Consequently, fallow lands only are effective when one is able to work them and when the entire complex of agrotechnical methods of raising grain are employed. Economic organs must not only advocate fallow lands, but also deal more strictly with individuals who have an indifferent attitude toward them or who poorly use the land.

Almost 3 million hectares of arable land has been subjected to erosion on the broad Don Steppe which is often subjected to strong winds. A reliable barrier in its path is a soil-protection system of farming and surface treatment of the soil. This not only protects the fields, but also facilitates raising their productiveness. Two years ago on Kolkhoz imeni XXII parts"yezda in Sal'skiy Rayon and Pravda Kolkhoz in Morozovski Rayon the harvest of winter wheat planted following surface treatment exceeded the yield of grain from plowed fields by 7-12 quintals.

It is no accident that scientists and specialists are recommending surface treatment of the soil for the winter crops on a million plus hectares. But the scale of use of this progressive technology is significantly less. What is delaying its implementation? Until the present several farm leaders and specialists accustomed to seeing the mouldboard plow in the field underestimate the new progressive method of soil treatment, while party committees in a number of rayons are content with a similar outlook. In addition farms lack the soil processing weapons--disk harrows, sharescufflers and disk tillers, and spiketooth harrows. Thus, there are 3,000 cultivators and subsurface cultivators in the Oblast and we need 6,500, there are 700 heavy disk harrows on the farm and we need about 4,000. Orders for these mechanisms and machines continue to remain unsatisfied.

On almost every kolkhoz and sovkhoz that we visited the field technologists complained that they did not receive enough mineral fertilizer. There actually was not enough to make up for the losses of nutrients taken up by the harvest. But there is the capability on the farms to accumulate more manure and distribute it at not less than 3-4 tons per acre. This level has already been achieved in some areas. Last year a hectare of arable land received 4 tons of organics in Orlovskiy and Neklinovskiy rayons, while those in Myasnikovskiy, Zernogradskiy, Yegorlyskiy, and Chertkovskiy rayons received 3 tons. But, on the average throughout the oblast a hectare receives a scarce amount of fertilizer--it receives only about 2 tons of local fertilizers.

Irrigated lands might serve as a good aid in the struggle for a high, stable harvest. Their area exceeds 400,000 hectares. They make a weighty contribution on progressive farms. However, average product yields are small. The culture

of the irrigated field is low, a type of low-yield sort is planted in them, and fertilizer is poorly utilized. Also, approximately 30,000 hectares remain unirrigated annually. It is difficult to achieve a guaranteed harvest given such an attitude to the insurance field.

The farmers of the Don have many reserves for improving the effectiveness of the grain economy and obtaining stable harvests. It is important that they be used fully. In the competition for the bountiful Don spike begun at the initiative of farmers from Azovskiy Rayon and from Gigant Sovkhoz includes 2,400 brigades and departments, of which more than 900 intend to obtain more than 32 quintals of grain per hectare. In their labor in the spring field they are putting forth full effort trying to bring the cherished goal closer.

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TILLING AND CROPPING TECHNOLOGY

GRAIN PRODUCTION OBLIGATIONS OF MINISTRY OF AGRICULTURE FOR BASHKIR ASSR

Moscow PRAVDA in Russian 11 May 80 pp 1-2

[Article by A. Petrushov, Bashkir ASSR: "From the Ministry To a Brigade"]

[Text] The Bashkir ASSR land is beautiful in its spring attire. The groves and oak forests are turning green in color and the meadows and arable land are springing back to life. Field work is unfolding in all areas. This year it is being carried out by more than 1,400 mechanized complexes. The workers on farms throughout the autonomous republic have undertaken the task of obtaining 6.3 million tons of grain during the final year of the five-year plan and supplying the granaries of the homeland with 2.4 million tons. In the campaign to bring in the harvest and achieve high final results, a considerable contribution must be made by the services of the system which administers the branch, the partners of the farmers. In particular, a great role must be played by the republic's Ministry of Agriculture. It must display concern for improving the forms and methods for organizing and motivating labor, propaganda and the introduction of scientific and practical achievements and it must furnish constant assistance to the production workers. How are these obligations being carried out?

At the Kolkhoz imeni Karl Marx in Chekmagushevskiy Rayon, we met with Vadim Ivanovich Gnedin, the chief of the Department of Seed Production. He was standing at the edge of a sown tract of land and explaining to the chief of the tract, Ayrat Yusupov, how to tend the seedlings of Nosovskiy-9 barley, which had been sown here for the very first time.

"I come here almost every spring" stated V. Gnedin, "It is a seed production farm and it propagates elite seed. Such promising varieties as Chulpan winter rye, Moskovskaya-35 spring wheat and Astor oats are sent out from here to fields in this and other rayons."

During these spring days, other workers from the ministry are going out onto the fields. They are furnishing assistance in improving the agricultural practices and the structure of the plantings. Special concern is being displayed for the foundation for both the present and future harvests -- the seed.

There was a time when the leaders of a number of farms and the agronomists traveled extensively throughout the country. Fewer such trips are being made at the present time. Nor is this the result of there being reduced interest in new developments. The ministry and its services, together with local organs, have accomplished a great deal aimed at improving strain renovation work and placing seed production on an industrial basis. The production of seed of high reproductions is now being carried out by experimental farms of scientific-research and educational agricultural institutes. A network of specialized kolkhozes and sovkhoses has been created. The path traveled by a variety from a plot to the field has been shortened.

In the office of the republic's Minister of Agriculture, A. Aminev, there was a colorful diagram showing the growth in cropping power. Grain production in the Bashkir ASSR is increasing. During the past 4 years, the kolkhozes and sovkhoses sold almost 9 million tons of grain to the state -- 76 percent more than the figure for the previous five-year period.

The services rendered by the ministry here are unquestionable. For example, let us take Chulpan winter rye. It became acclimatized to the conditions found in Chekmagushevskiy Rayon. For practically 3 years, this non-lodging and highly productive variety was sown on one half of the republic's rye fields. And in all areas it is producing a worthy increase in yield. Such wheats as Moskovskaya-35, Khar'kovskaya-46, Saratovskaya-36 and others have also been given the "green light." This year, highly productive varieties will be grown on 654,000 hectares and occupy two thirds of the spring crop fields. Considerable contributions towards renovating the fields have been made by such agronomists as Yu. Moryakov in Baumakskiy Rayon, F. Vil'danov in Blagovarskiy Rayon, F. Biktashev in Chisiminskiy Rayon and N. Aksakova in Aurgazinskiy Rayon, all of whom work in close collaboration with the ministry's specialists.

Utilizing the best experience available, the republic's Ministry of Agriculture constantly displays concern for raising the fertility of the land. For example, last year the kolkhozes and sovkhoses applied more than 6 million tons of organic fertilizers to the fields and this year -- almost 8 million tons. The effectiveness of use of the mineral fertilizers has been raised. A qualitative evaluation of the land has been completed. A review of the work -- a 2-volume work entitled "Pochvy Bashkiri" [Soils of Bashkiriya] and evaluation maps. They aid the farmers in making better use of their land. A great deal has been accomplished by specialists of the ministry and the rayon administrations with regard to introducing the Ipatovo method for organizing labor into operations on an extensive scale. Here is how the chairman of the Chekmagush Kolkhoz imeni Karl Marx S. Idrisov, evaluates it.

"In the past, the sowing of early grain crops required a week or more of our time. Today we can cope with this work in just 100 hours. And each day saved represents an increase in yield."

Nevertheless, that which has already been achieved is not viewed as a maximum limit. Great differences in cropping power still prevail throughout the republic and the difference between what many farms are supplying and what they are capable of supplying is still great. Dozens of kolkhozes and sovkhoses are obtaining 4-9 quintals of grain per hectare and miserly yields for their technical and forage crops. It is the responsibility of the specialists attached to the ministry and to the rayon agricultural administrations to ascertain the reasons for their having fallen behind and to define methods for strengthening the economy. One such example is sufficient to underscore the importance of timely and qualified assistance. Several years ago, Kaltasinakiy Rayon was numbered among the backward rayons. Here the production of grain and feed had decreased. A reduction had also taken place in the productivity of animal husbandry.

A group of workers from the ministry paid a visit to Kaltasy. Together with the farm and brigade specialists, they studied the situation. It turned out that one of the reasons for the rayon falling behind was the shortage of experienced middle echelon personnel. The ministry furnished assistance to the kolkhozes in the selection and training of brigade leaders and farm managers. And this produced results. The Kaltasy workers are gradually restoring order to their fields and they are coping with their plans for supplying the state with animal husbandry products.

But it is not too often that such facts can be cited in the ministry. More often than not, the ministry appears to shy away from those concerns considered to be most vital to the production workers.

"When I was invited to work in the ministry, I thought that I would be taking part in active work. Alas, my hopes were not justified. Meetings, conferences, memoranda and reports. There simply was not enough time."

Such was the comment I overheard many of my co-workers making, individuals who, in their own words, had become "paper prisoners." During the past year, 1,114 orders, instructions and reports were issued from Ufa to the Zianchurinskiy Rayon Agricultural Administration. Yes and 948 papers were dispatched from the latter point. Do practical workers derive much benefit from such "work"?

"During the year" related the chief zootechnician for the Zianchurinskiy Administration, R. Abdullin, "I visited the farms and brigades on only about 10 occasions. The remaining amount of time I spent composing memoranda or traveling to Ufa to deliver reports."

Similar statements were made by the administration's agronomists. Meanwhile, reports are being received from fields in Zianchurinskiy, Blagovenshchenskiy, Tuymazinskiy and certain other rayons concerning problems that the sowing

conveyer line teams are encountering in their work, violations of the agrotechnical practices and clumsy use of progressive agricultural methods. And the skilled specialists are engaged in composing memoranda.

As you can see, this "creativity" is costly. As a result of it, the specialists do not have time to investigate thoroughly the problems of the branch or to take note of and employ new developments in a timely manner. Moskovskaya-35 wheat, which is praised highly throughout the republic, was regionalized only 2 years ago. However, it was earlier grown extensively on farms in Ilishevskiy Rayon, with high yields being obtained.

Permit me to cite still another example. The agronomists in Meleuzovskiy Rayon employed a pre-sowing treatment for corn seed which involved the use of special preparations. Nor did they learn about this method from workers attached to the Ministry of Agriculture -- rather from newspapers and magazines.

The field of activity for the ministry and its subordinate services is extensive and there are many unsolved problems. Almost 70 percent of the land in Bashkiriya is subject to water and wind erosion. On the average, a hectare of arable land loses approximately 8 tons of humus annually and the damage caused by such losses is measured in many millions of rubles. The solution for this problem is well known: a soil-protection system. But the use of such a system was delayed this spring owing to the fact that certain farm leaders failed to attach the proper degree of importance to this work. If the branch staff will not assist the farmers in acquiring a thorough understanding of the need for new agricultural methods, then who will? As you can see, sufficient time simply is not available for carrying out the most important task -- introducing scientific achievements and leading experience into production operations. Last year the plan for mastering new innovations was not fulfilled in terms of 36 important themes.

The board of the ministry recognizes these shortcomings. On more than one occasion, for example, discussions were held here on those problems concerned with raising the creative activity of the specialists. And the results? Just as in the past, they still lack personal creative plans and the work of the branch departments is being coordinated in a very weak manner. Nor have any improvements been realized in executive discipline. Work has commenced within the ministry in connection with composing a plan for introducing progressive technologies and methods for organizing labor in field crop production and animal husbandry for the Eleventh Five-Year Plan. The draft plan was circulated to all of the subordinate services for the purpose of discussion. The most undisciplined individuals turned out to be the ministry's workers. Many branch departments have still not submitted their own recommendations in this regard.

There would have been fewer blunders if the party organization, which numbers 248 communists, had exercised greater control over the work of the administration. However, current and at times matters of a secondary

nature are as a rule discussed from time to time during the meetings, with solutions being developed which are often general and declarative in nature. No action is taken by the commissions of the party committee. The reports of the communists concerning production and social activity are listened to on a case by case basis. Meetings of the party committee are only rarely attended by leaders from the ministry. The party organization participates very little in personnel selection and placement work.

The oblast party committee and the republic's Council of Ministers are aware of the ministry's shortcomings in operational style and methods. It is often criticized here, with the recommendation being made that it participate more in carrying out organizational work directly in the rayons and at the kolkhozes and sovkhoses. But proper exactingness is still not being displayed. Moreover, numerous memoranda, summaries and other "papers" not required by state bookkeeping are at times being prepared based upon instructions received from local party and soviet organs.

Field work is in full swing in Bashkiriya at the present time. While completing their sowing of early grain crops, the farmers are at the same time planting their sugar beets, sunflowers and forage crops. The workers attached to the Ministry of Agriculture are sharing their concerns for the harvest with the machine operators and specialists. The party and soviet organs throughout the republic must display concern for ensuring that the links between the ministry and the production workers become stronger and that more effective and productive assistance is furnished to the rural areas.

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END

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